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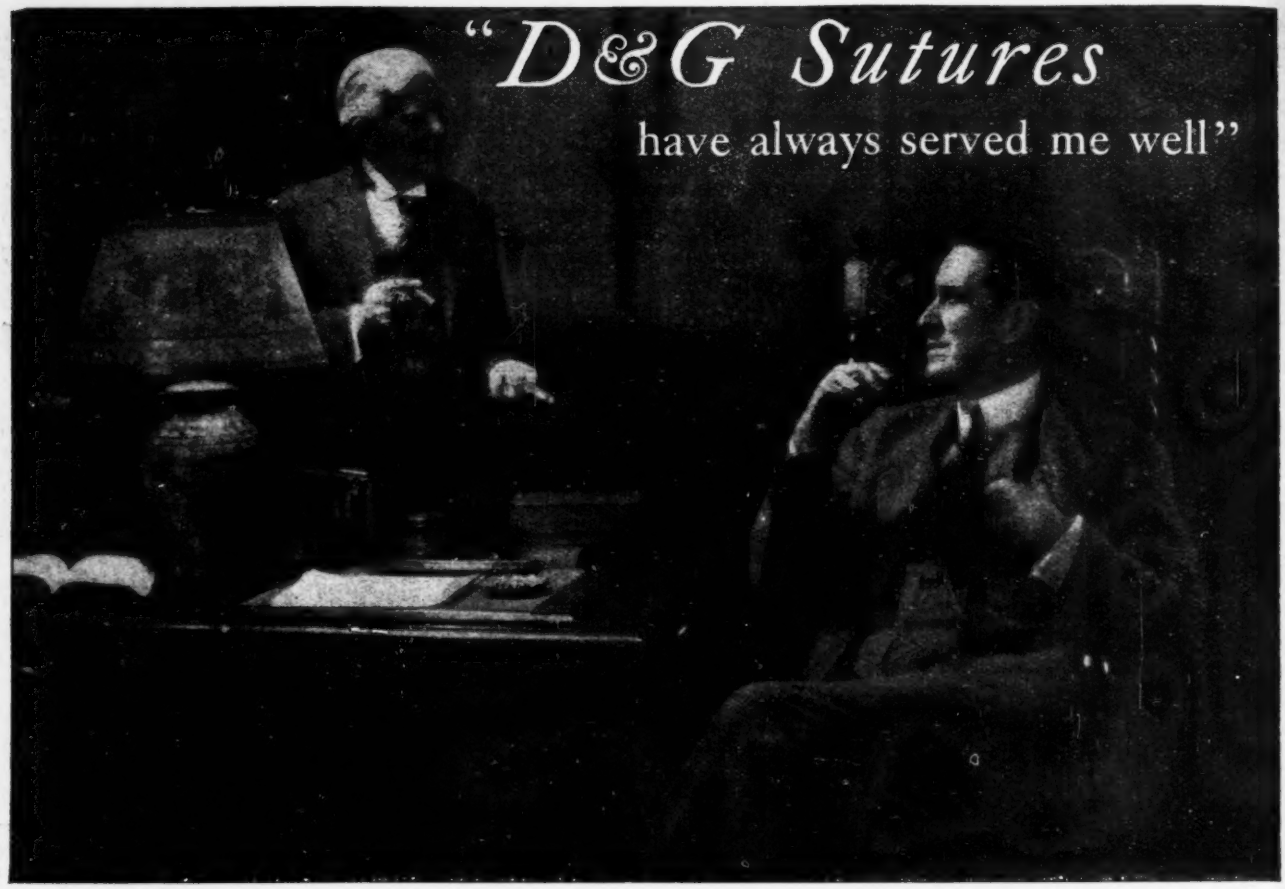


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# British Medical Journal.

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LONDON: SATURDAY, JANUARY 5TH, 1929.

## A Lecture ON THE PSYCHOLOGY OF CONJOINED TWINS:

### *A STUDY OF MONSTERHOOD.*

DELIVERED TO THE LEEDS UNIVERSITY MEDICAL SOCIETY, NOVEMBER 20TH, 1928,

BY

SIR JOHN BLAND-SUTTON, BT., LL.D., F.R.C.S.,
CONSULTING SURGEON TO THE MIDDLESEX HOSPITAL.

Women shall bring forth monsters.—II Esdras v, 8.

CONJOINED twins, or monsters, which is the vulgar name for these unfortunate human beings, have interested the world for centuries. Anatomists one hundred years ago called them "freaks." In museums of pathology many double foetuses are preserved and shown to visitors as curiosities. This is pardonable because it was impossible to give an explanation of such conditions on account of the ignorance of the prime factors concerned in animal reproduction.

Conjoined twins interest embryologists, doctors, midwives, surgeons, and psychologists.

Embryologists are mainly concerned with their origin. One ovum, as a rule, gives rise to one embryo; not infrequently an ovum may be the source of two embryos; each may be a separate individual, be born, mature, manifest average mental capacity, physical power, and reproductive ability. Mammals are known in which a single ovum may give rise to several embryos. Thus in the nine-banded armadillo, *Tatusia novemcincta*, from one ovum four embryos normally arise (Fig. 1). They are of the same sex. This is called polyembryony.

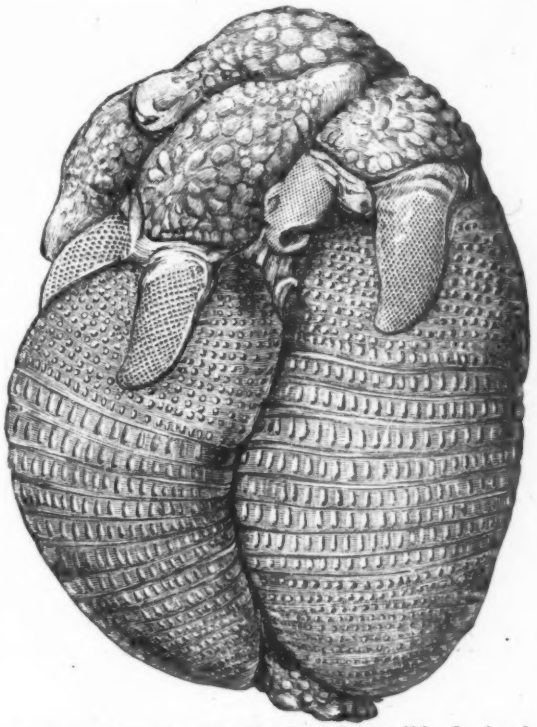

FIG. 1.—Quadruplets of the Nine-banded Armadillo, developed from a single ovum.

Embryologists are occupied with the experimental production of double creatures such as starfishes, newts, salamanders, and the like. The eggs of such aquatic forms are large enough to permit of delicate manipulation, and some experimenters are so clever that they can divide the developing ovum, either with an extremely fine needle or a fine sterilized hair, without arresting the growth of the ovum, and then observe the fragments develop into complete individuals, or become monstrous forms. In one lucky instance an embryologist (Clarke), studying the development of the American salamander, noticed something unusual with the anterior extremity of the medullary fold; he set the egg aside and had the satisfaction of watching the development of a two-headed salamander.

Conjoined twins are common among salmon-fry in hatcheries; they have also been observed in many classes of vertebrate animals—fishes, reptiles, birds, and mammals. Examples are preserved in all well-stocked anatomical museums throughout the world.

Doctors and midwives are concerned in the delivery of twins—especially the birth of monsters, but mainly in regard to the safety of the mother. Judging from the large number of monstrous twins preserved in museums, conjoined twins rarely survive their birth. In some cases Caesarean section is required. In many instances the mothers are multiparous; in some of the best known the reports run: "the twins were born without difficulty." The mother of the Siamese twins Chang—Eng (Fig. 2) stated that the head of one twin was between the legs of the other, and they were born easily. When Laloo (Fig. 3) was born the arms of the parasite were around the neck of the autosite.

In Eastern countries conjoined twins of any kind are regarded as portents. When Chang—Eng were born the King of Siam, conceiving them to be monsters, imagined they portended evil and designed them to be put to death (*Phil. Trans.*, 1830, 177).

Surgeons critically study conjoined twins because they have to exercise their wits as to the possibility of separating them successfully. This matter has received attention in individual cases from surgeons of the highest reputation and skill.

Although the object foremost in my mind in this lecture is to discuss the psychology of these persons who, when inseparable surgically, are condemned to a life of bondage, it will be necessary to describe some examples illustrating the various forms such twins assume.

### CONJOINED TWINS.

The best known example of this variety is the Siamese twins Chang—Eng. They were discovered by Captain R. Hunter in 1829; the twins were fishing in the Siam River; they were naked above the waist, and he imagined them to be some rare animal. Hunter ascertained from their mother that they were born without difficulty; he saw them when they were 18 years of age. Sir William Fergusson examined them (1829) in regard to the question of separation, and did not favour operative intervention. The twins were exhibited in New York as Chang and Eng Bunker. They were skilful at battledore and shuttlecock, became affluent, and married two sisters—daughters of a Wesleyan minister. Chang had ten children and Eng twelve. The twins were shown in England in 1869, and

surgical separation impracticable. The photograph represents them at the age of 18, and the showman speaks of their "health and beauty." They are intelligent, good musicians, can play the saxophone and other instruments, and they have acquired a comfortable fortune. A report more laconic and quaint would be difficult to conceive. Dr. James Rooth has furnished an excellent account of the delivery and infancy of the Brighton twins in the *British Medical Journal*, 1911, ii, 653.

Apart from the many disagreeables incidental to such unions, there is this dominating question: What will happen if one twin dies before the other?

Lazarus—Johannes Baptista Colloredò was born in Genoa in 1617. Each child was christened separately, and when

FIG. 6.—Violet-Daisy Hilton, the Brighton Twins.

they grew up were exhibited all over Europe. They were described by G. Bartholinus, professor of anatomy at Copenhagen. At that date the twins were 28. It is worth notice that Lazarus was of a just stature, courteous in deportment, and gallantly attired. He covered the body of his brother with a cloak, as presaging that when he died, he should also expire with the stink and putrefaction of his body. Lazarus therefore took the greatest care of his smaller brother. This is a good example of kindness for selfish reasons.

It is established that, as a rule, in the case of conjoined twins the death of one is quickly followed by the death of the companion. The fate of the pygopagous twins Rosa—Josepha Blazek, born at Prague and known throughout the world as the Bohemian Twins, is worth recording on account of its pathos. Josepha had pneumonia followed by catarrhal jaundice in Chicago in 1922, aged 44. Rosa refused to be separated from her sister. Josepha died first; Rosa died fifteen minutes later. Rosa's last wish was that she should be allowed to die with her sister. Rosa's son insisted on his mother's wish being respected, saying he preferred being an orphan to denying his mother's last request. At the age of 32 Rosa fell in love with the showman and conceived. She gave birth to a living child at Prague. The child was in Rosa's womb, but Josepha as well as Rosa had milk in her breasts (see *Tumours*, seventh edition, 1922, p. 502). A curious legal question arose because both women died intestate, and some relations of Josepha, the unmarried twin, claimed part of the estate.

# LYMPHADENOID GOITRE AND ITS CLINICAL SIGNIFICANCE.

BY

G. SCOTT WILLIAMSON, M.D., AND INNES H. PEARSE, M.D.

(Dunn Laboratories, Professorial Units, St. Bartholomew's Hospital, London.)

WITH

*A NOTE ON ITS ETIOLOGY IN RATS*

BY

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BREVET COLONEL I.M.S.

(Nutritional Research Laboratories, Coonoor, South India.)

*(With Special Plate.)*

WHEN working on the histology of the thyroid in 1925 we found that there were two activities carried on by the normal gland.[1] This conclusion has since been substantiated by evidence drawn from several other sources—biochemical, biological, and clinical.[2 3] The two functions we refer to are: (1) The production of secretion proper; or what for greater precision may be called "lymphogenic" secretion. This secretion contains no thyroxin. (2) The accumulation of colloid—that is, iodo-colloid, which contains the thyroxin moiety of the thyroid products.

One of the features of the normal secretory process is the conspicuous activity of the reticulo-endothelial cells[4] with the production of lymphocytes in the interfollicular lymph spaces of the thyroid gland units. It is this latter feature of the secretory process which calls for the specific designation "lymphogenic" secretion.

To the pathologist the knowledge of a specific process in the normal physiology of a gland must lead to search for the corresponding pathological condition in which undue strain falls upon that specific process. This, then, led us to look for a class of thyroid disorder in which the functional imbalance would lie in the over-production of lymphocytes during the secretory process of an otherwise normal thyroid gland. In the course of a review of about 4,000 goitres we were able to separate some glands answering to this description. These, when ranged in sequence, betrayed their own pathological sequelae—fibrosis and atrophy. Thus a pathological condition which had been obscure could now be discerned as a specific progressive disorder often associated with goitre. To this class of enlarged thyroid gland we gave the name "lymphadenoid goitre."* [5]

Goitres which essentially belong to the group of lymphadenoid goitres have been called by earlier observers "chronic inflammatory thyroiditis," "granulomatous thyroiditis," "endothelioma," "sarcoma," and also "Riedel's disease" or "woody thyroid," etc. Although these various designations fail to convey the true pathogenesis of this condition they do indicate its most striking features: (1) the lymphocytic activity which is typical of the early or progressive stages of the process, and (2) the fibrosis and atrophy which accompany its later stages.

The lymphocytic infiltration is peculiar in that it picks out the *specific* thyroid lymph spaces in a most delicate and selective fashion (Figs. 1, 4, and 5). In this manner

* The lymphadenoid process need not cause enlargement of the gland; indeed, it has been found as a progressive condition in senility.

*(By G. Scott Williamson, Innes H. Pearse, and R. McCarrison.)*

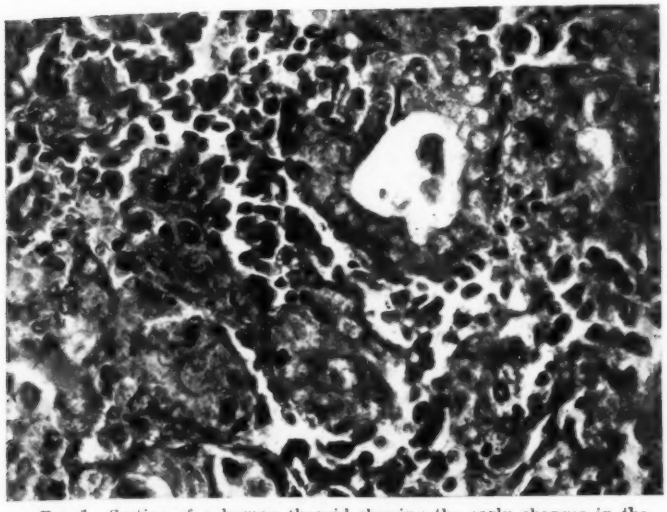

FIG. 1.—Section of a human thyroid showing the early changes in the lymphadenoid state. Lymphocytes fill the lymph sinusoids between the epithelial columns. Colloid is absent. The follicle is a "secretion" follicle.

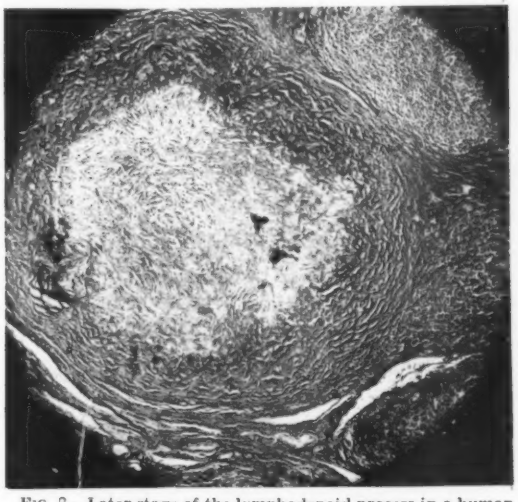

FIG. 2.—Later stage of the lymphadenoid process in a human thyroid. A whorl of fibrous tissue replaces a gland-unit.

FIG. 3.—Section of a lymphadenoid thyroid of a man, aged 65, who died an accidental death and had no symptoms. The white opaque areas are foci of lymphogenesis.

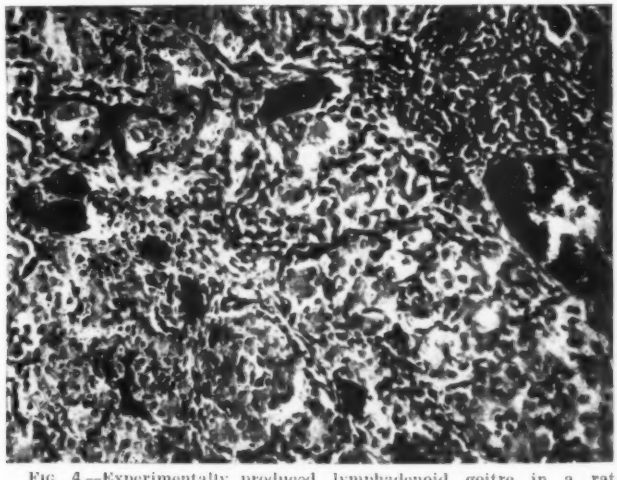

FIG. 4.—Experimentally produced lymphadenoid goitre in a rat showing invasion of the lymph sinusoids with lymphocytes and an aggregation of lymphocytes in one part of the field.

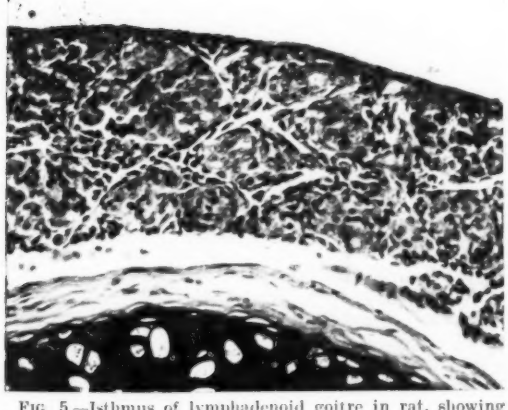

FIG. 5.—Isthmus of lymphadenoid goitre in rat, showing invasion of the lymph spaces with lymphocytes and the absence of both secretion and colloid follicles.

FIG. 6.—Isthmus of normal thyroid in "control" rat, for comparison with Fig. 5.

*(Illustrating the article by Bernard Hudson, printed at page 15.)*

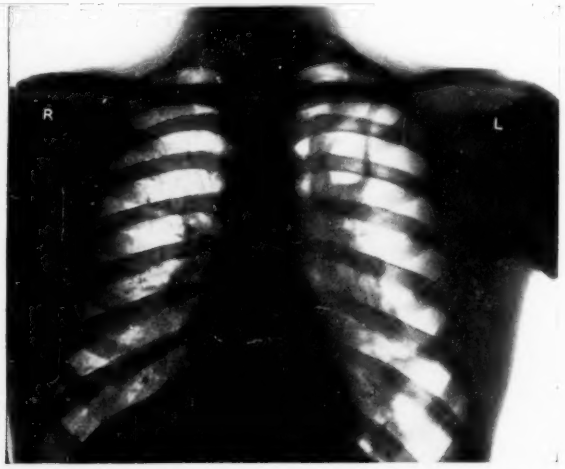


FIG. 1.—Case II: Radiogram showing condition before cauterization.

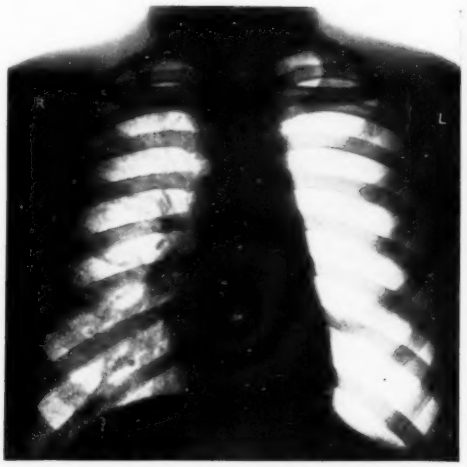


FIG. 2.—Case II: Condition after cauterization.

## H. MARTIN GREY: A NORMAL VENTRICULOGRAM.

*(See page 15.)*

Posterior view of skull, showing anterior horns of lateral ventricles close together, with the third ventricle lying immediately underneath.

Anterior view of skull, showing posterior horns of lateral ventricles widely separated.

it affords a beautiful picture of natural injection of the thyroid lymph sinusoid, and lends further confirmation to our conception of the essential nature of the thyroid gland units.

As the disease progresses the lymphogenesis becomes more and more active; lymphocytes begin to collect at the hilum of the gland-unit and to range themselves in a circular fashion around its circumference as they crowd in the perivascular lymph spaces about the capsule of the gland-units. With the increasingly active lymphogenesis the parenchyma, which is producing the lymphogenic secretion, becomes hyperplastic, and active mitosis appears in the epithelium. The overgrowth of the parenchyma is so great that, in some cases, islands of solid epithelial tissue fill the follicular spaces, from which by this time all secretion has been drained away. It is noteworthy that lymphocytes only accumulate in and about those gland-units wherein lymphogenic secretion is being formed. In the follicles where colloid is accumulating there is no perifollicular lymphocytosis. This characteristic feature of the condition can, of course, only be observed in earlier cases in the human subject and in the experimentally produced condition in rats; for, as the process advances, the abnormal lymphogenic activity claims the whole field, and colloid storage becomes inconsiderable. Exhaustion of the epithelium eventually ensues, and now, no longer able to produce secretion, it becomes atrophic.

Meanwhile the cells of the reticulo-endothelial system, so actively concerned in the lymphogenic process, also suffer; an insidious fibrosis invades this tissue, creeping along its course from the periphery of the lymph sinusoid towards the centre, until there ultimately appears a complete fibrous skeleton replacing the reticulo-endothelium of the affected gland-unit (Fig. 2). The process is not that of scar formation. It is one of replacement fibrosis beginning in the reticulo-endothelial system, which is the region of functional "strain," and finally involving also the isolated islands of exhausted epithelium. The picture produced by the end-result of this process is a characteristic and peculiar one, for the gland-unit is entirely replaced by fibrous tissue. An ever-increasing number of complete fibrous whorls are ultimately formed throughout the thyroid, each whorl representing what was originally an active gland-unit of thyroid tissue. This is the "woody" thyroid of Riedel's disease. Area after area of these whorled fibrous nodules become linked together by the late progressive fibrosis of the interlobular lymph channels, and the once much enlarged thyroid tends finally to shrink into a small knot of fibrous tissue, unrecognizable as a thyroid gland except for its position. This gland is the gland of myxoedema.

It is clear from the progressive and ordered chain of events in the pathology of lymphadenoid goitre that there was justification for postulating the association of this type of thyroid with some general, as yet undifferentiated, constitutional disorder, the terminal phase of which was myxoedema.[5]

The sequence of events which thus leads up to the gland of myxoedema had been already noted by Simmonds.[6] He also emphasized the fact that this sequence of events was to be found apart from myxoedema, but in evident association with hypothyroidism. A further survey by Simmonds showed conclusively that this was not a secondary event in infectious disease, but a very specific condition of the thyroid. The lymphogenesis, as he points out, is the cause of the fibrosis and atrophy, and not a reaction following primary atrophy of the gland. Tebbutt, in a study of the condition, confirms Simmonds's main conclusion, and definitely links the pathological process to a progressive hypothyroidism and ultimate myxoedema.[7] Carrying this a step further we have shown that lymphogenesis is a function of the normal thyroid, so that lymphadenoid goitre becomes an expression of a disturbance of the lymphogenic function of the gland. We may conclude that there is some specific general disturbance which expresses itself in the thyroid gland as lymphadenoid goitre. The general condition has as its clinical sequelae hypothyroidism and finally myxoedema. Spontaneous myxoedema is thus the termination of a general disease rather than the sequel of a local thyroiditis.

Clinicians have recently begun to recognize the condition, with the result that during the last eighteen months four out of the seven lymphadenoid goitres we have received from the operating theatre were diagnosed as such before operation. It is not for us to speak, however, of the full clinical syndrome; suffice it only to say that the tendency for lesser or greater degrees of myxoedema to accompany the goitre is already well recognized by the surgeons familiar with these cases. It is, indeed, likely that many cases exist in which no symptoms occur until the insidious fibrous atrophy induces a spontaneous myxoedema. Thyroid glands are occasionally found *post mortem* in which the early stages of the lymphadenoid condition are observable in the gland histology, but where there is no record of any coexisting symptoms (see also Simmonds). A figure is shown of one such gland taken from a man, aged 65, who died an accidental death (Fig. 3). It is certainly true that the typical gland attributed by the pathologist to myxoedema is identical with the gland of the terminal stage of lymphadenoid goitre.

Let us now turn to a consideration of the etiology of the condition. McCarrison has for many years been concerned to demonstrate that the thyroid gland plays an important part in the general metabolism and, further, that other workers, by confining their attention exclusively to the metabolism of iodine, have been taking too narrow a view of the thyroid function. He therefore set out to cause a goitre on a diet which contained iodine. He was guided in his choice of diet by the experience of his previous work, which showed the overwhelming influence of vitamins in the functional turnover of the lymphocytes in the intestine—or intestinal lymphogenesis.[8] He ultimately found a diet, containing an abundance of iodine, which gave rise to a disturbance of the lymphogenic function of the thyroid gland. In other words, McCarrison has produced experimentally a lymphadenoid goitre.

There is no room for doubt that the goitre produced in the rat and the goitre of the natural disease in man represent the same condition (Compare Fig. 1 with Figs. 4 and 5). The rat goitres represent the earlier stages, the greater number of human lymphadenoid glands encountered represent both the early and the later stages of an identical pathological process in the thyroid. Unless the human glands are completely replaced by fibrous tissue, areas can always be found somewhere in them in which the condition is still progressive; if the rat goitres are selected some will be found in which the characteristic fibrosis is already beginning to show. In the human subject the age at which the progressive symptoms show themselves is rarely before 45 years, while myxoedema, of course, occurs on an average a decade later. We have, then, every reason to expect that the terminal phase of lymphadenoid goitre can also be produced in rats, provided they can be kept alive sufficiently long under suitable experimental conditions.

## NOTE ON THE EXPERIMENTAL PRODUCTION OF LYMPHADENOID GOITRE IN RATS.

BY

COLONEL R. McCARRISON, I.M.S.

The composition of the diets used in the experimental production of lymphadenoid goitre[9 10] in rats is as follows: American white flour, 72 to 82 parts; meat residue, 5 to 15 parts; olive oil, 8 parts; salt mixture, containing 0.45 per cent. of potassium iodide, 5 parts; distilled water *ad lib.* Various modifications of this diet, containing greater or lesser amounts of white flour, or having certain proportions of the white flour replaced by starch, have also been used.

Approximately 25 per cent. of young rats fed on diets of this composition, and confined in separate cages under conditions of the most scrupulous cleanliness, have exhibited goitres of various sizes at *post-mortem* examination. The goitres have been found in rats killed, or dying, as early as 75 days from the initiation of the experiments and as late as 165 days. They have occurred more frequently in females than in males. Macroscopically they are of glistening, fleshy appearance, bright or darkish red in colour, and vary in size from twice to five times that of the normal

thyroid. The isthmus is usually prominent, thickened, and broadened. One lobe is commonly more enlarged than the other; occasionally the enlargement is unilateral (Figs. 5 and 6).

Microscopically the goitres have presented in detail the appearances described by Williamson and Pearse as characteristic of the progressive stage of lymphadenoid goitre in the human subject. It is exceptional to find pronounced retrogressive changes—fibrosis and atrophy—in the rat goitres, although these have occasionally been encountered in relatively mild degree. Lymphadenoid changes have also been observed in glands presenting no obvious signs of enlargement; they were confined to certain areas in an otherwise apparently normal organ.[9 10 11]

Having had an opportunity recently to examine under the microscope sections of lymphadenoid goitre in man, side by side with others of experimentally produced lymphadenoid goitre in rats, the identity of the pathological state of the thyroid gland in man and in rats was apparent.

To the physician or surgeon who has to deal with goitre in the human subject the points of interest arising from these observations are: (1) lymphadenoid goitre occurs in man; it can be produced under experimental conditions in rats. (2) It arises in approximately 25 per cent. of young rats despite the adequate ingestion of iodine. (3) Deficiency of iodine in the food is certainly not the cause of lymphadenoid goitre as it occurs in rats; it is unlikely, therefore, to be the cause of lymphadenoid goitre as it occurs in man. (4) The basal factor in the causation of lymphadenoid goitre in rats is a dietetic one; it may reasonably be expected that the basal factor in its causation in man is likewise dietetic and of a like order. (5) Judging from experimental experience in rats the diets which are likely to be associated with lymphadenoid goitre in man are those composed largely of white flour or other vitamin-poor carbohydrate, vitamin-poor protein, and vitamin-poor fats and in which there is a paucity of fresh fruit and green leafy vegetables. In view of the almost universal use of white flour as the main staple of the dietary in Western countries, of the widespread use of vitamin-poor carbohydrate foods, of substitutes for butter which are relatively poor in vitamin A, of the use also of frozen and tinned meats, and of the small proportion of fresh fruit and green leafy vegetables in many people's dietaries, the etiological significance of the observations made on rats appears to me to be great.


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# THE PREVENTION AND EARLY DIAGNOSIS OF THE ACUTE ABDOMEN.*


BY

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THOUGH the title of my paper includes the early diagnosis of acute abdominal disease I wish to deal chiefly with the prevention of the acute abdomen. This convenient but slang term is generally taken to cover those acute conditions which come without warning, like a bolt from the blue, and it is seldom that a word is heard about measures for preventing such catastrophes. It is easy to see how this fatalistic attitude has arisen. In the course of practice the surgeon—who is largely responsible for current teaching—sees the patient in the throes of an acute calamity, the slighter premonitory features have been overshadowed by the catastrophic culmination, and there is frequently no strong inclination to prolong the time between diagnosis and operation in eliciting a meticulously accurate history of preliminary symptoms. As an example of this attitude I could cite a reference to a book published in 1914 by a famous London surgeon who, in describing a case of appendicitis, said "no surgeon of experience pays much regard to history." Until this attitude is replaced by one of very careful study of all the antecedents of the more acute conditions we cannot hope to diagnose early, much less prevent the disease.

I will first consider the extent to which it is possible to prevent the onset of any acute abdominal disease, and secondly how to prevent any acute condition which has actually started from reaching a catastrophic stage.

Until the exact pathology of the various abdominal conditions is known it is, of course, impossible to take exact precautions to prevent, but by a careful attention to symptoms it is occasionally possible to detect serious disease before it is acute. The different diseases vary greatly in their preventability, but it is worth while considering the question in each group of cases.

Take first the question of perforated gastric and duodenal ulcer. Is it possible to prevent perforation? If we only consider the acute ulcer which develops within a few days and precipitately perforates, the answer must be No; but when we recollect that the majority of ulcers which perforate are those of long standing the reply should be a modified affirmative. Chronic ulcers can now be diagnosed by means of the *x* rays in the great majority of cases, and if the correct treatment is adopted it should be possible to prevent perforation. If I am asked, What is the correct treatment—is it medical or surgical?—I cannot tell unless the type of ulcer is specified, and who is to carry out the treatment. Some ulcers are, I think, curable by the alkali method or by means of the duodenal tube; others hold out no hope of cure other than by surgery. The patient should be kept under treatment and supervision until the radiological evidence of ulcer has disappeared and the symptoms have subsided.

An ulcer may continue for many years without preventing the patient carrying out his duties, so constant supervision is necessary. A medical friend of mine, when a student with me, had a very severe melaena and all the symptoms of duodenal ulcer. He was advised to have an operation, but refused, and for twenty years managed a busy practice, though constantly ailing with dyspepsia and latterly having to give up from time to time. He was supposed to be rather neurotic by those who had not seen the melaena and did not know his character. Eighteen months ago (and twenty-two years after the melaena), while on a motor tour in Scotland, he had all the symptoms of perforation—pain, collapse, etc.—though fortunately the symptoms subsided with rest. I saw him a little later. An *x*-ray examination revealed very extreme pyloric stenosis and an ulcer crater in the duodenum. At the operation I found a mass of fibrous tissue all round the first part of the duodenum, with a recent perforation sealed over by omentum. Now this patient, who was known to have an ulcer, waited twenty years for his perforation, and but for the kindly offices of a bit of omentum might easily have succumbed. Correct treatment of the ulcer at an earlier date should have prevented this.

It is a common occurrence for there to be an exacerbation of symptoms for a few days before the perforation of a chronic ulcer, and this fact should be pointed out to all those who are known to have an ulcer and yet will not submit to give up the time necessary for the correct treatment to be carried out. Rest should be insisted upon in times of acute exacerbation of the symptoms.

The most common acute condition in the abdomen is appendicitis, and it is no exaggeration to say that any method of preventing that disease would not only save two thousand lives annually in this country, but would also more than halve the number of acute cases upon which the surgeon would need to operate. Appendicitis is no new disease, for in the College of Surgeons can be seen an

* An address delivered to the Croydon Division of the British Medical Association, October 16th, 1928.

account, written by John Hunter's own hand, of a *post-mortem* examination performed by him on the body of a colonel who had died with symptoms of intestinal obstruction, but in whose abdomen Hunter found only a perforated appendix with peritonitis. Yet it cannot be doubted, either on looking into old *post-mortem* records or examining the statistics of cases of appendicitis and peritonitis in later years, that the disease has become much more frequent in the last three decades. If we could but find the reason of this, prevention should be within our power. An exhaustive inquiry into the possible causes of this increase was made comparatively recently by Mr. Rendle Short. He came to the conclusion that the increase in the incidence of appendicitis was most likely due to some change in the dietary of the nation, but his evidence was against the common assumption that increased meat-eating had anything to do with the increase of the disease. By comparing the common articles of diet at the present time with those most in use before the great increase of appendicitis Short found that the chief change was a gradual diminution in the amount of cellulose-containing foods. He suggests that herein lies the cause of the greater predisposition to, and incidence of, appendicitis.

I think it will be allowed that appendicitis is a microbial disease which attacks certain people who are at the moment of attack in a state of diminished resistance to that infection. It will hardly be questioned that stagnation of the intestinal contents and the presence of much decomposing meat in the intestines are factors which would favour the growth of the infective organisms. It may be that cellulose-containing foods help to prevent stagnation of the intestinal contents, and they may possibly supply some vitamin which maintains resistance against the organisms. The moral to be deduced from this is that, so far as our knowledge goes at present, a predisposition to appendicitis would be lessened by (1) preventing constipation, (2) minimizing the amount of meat eaten, and (3) increasing the amount of food containing cellulose.

A fourth suggestion is to diminish the total amount of food taken. It is generally agreed that most people in this country eat more than is necessary, and often more than is good for them. Now it has been shown by Rendle Short that in institutions such as prisons and some children's homes, in which a low diet is given, the incidence of appendicitis is much lessened; while Horsley Gantt, in his very interesting account of the classes of disease which attacked the starved and neglected Bolshevist masses after the revolution in Russia, pointed out that appendicitis, cholecystitis, and similar inflammatory diseases of the intestinal tract almost disappeared, although most varieties of infective disease were rife at the time. I believe that appendicitis will once more diminish in frequency if some of the suggestions here given are followed up.

In considering diseases of the gall-bladder it is wise to deal separately with gall-stones and cholecystitis. It is not at all uncommon to find an inflamed gall-bladder without any gall-stones, and though gall-stones are usually accompanied by inflammation, that is not necessarily the case.

Cholecystitis apart from gall-stones has a close relationship with appendicitis. The two conditions are sometimes present together, and may occur at different times in the same person. It is quite likely that the same causes will tend to produce both diseases, and this is supported by the remarkable and parallel diminution in their incidence in Russia after the revolution. It has lately been shown that the infection of the gall-bladder may be primary in the wall of the viscus, a fact which testifies to the route of the infection being by way of the blood stream. In the prevention of cholecystitis and appendicitis, therefore, the importance of dealing with any focus of infection which might furnish a source of origin of organisms which could travel by the blood stream to the abdominal viscera must be remembered. The throat, mouth, and accessory sinuses should particularly be attended to.

The regular emptying of the gall-bladder is important if infection is to be prevented from obtaining a hold. Though the exact mechanism of the emptying of the viscus is not yet determined with certainty, there is strong evidence, furnished by Lyon and Meltzer, to show that the lower end of the common bile-duct is relaxed under the influence of magnesium sulphate applied round the orifice in the second part of the duodenum. Though some of the magnesium sulphate taken by the mouth may be altered in the stomach, yet it would appear rational to recommend the occasional taking of Epsom salts by those who are thought to be predisposed to disease of the gall-bladder.

The actual prevention of gall-stones depends not only upon the prevention of infection, but also on the prevention of hypercholesterinaemia and the avoidance of too much inspissation of the bile. Our knowledge of the formation and metabolism of cholesterin is at present too vague for any definite dietetic precautions to be taken with any chance of success of avoiding the formation of gall-stones. The encouragement of the flow of bile has been mentioned above.

Of the other common intra-abdominal inflammations salpingitis due to infection with the gonococcus is a preventable infection in theory, but practically the question is not such an easy one. The female is not usually infected from an acutely inflamed male urethra—for obvious reasons—but the trouble arises from the awakening of a chronic infection which has been latent in the prostate or seminal vesicles, or possibly in the crypts of the urethra itself. It is of the utmost importance, therefore, that all infections of the male genital tract should be as far as possible eradicated, and permission to marry should not be given unless and until the infection has been destroyed. I am aware that this is a counsel of perfection, for the channels of the genital tract are devious and labyrinthine, but at all events a series of stringent tests should be made to determine whether the infection due to the gonococcus is still present or not. Only in this way shall we be able to diminish the number of those cases of acute salpingitis following soon after marriage—cases of truly tragic import. It is not sufficient to examine the discharge obtained from the urethra after prostatic massage. An artificial congestion must be produced by passing a full-sized bougie, or by injecting into the prostatic urethra a few minims of a solution of silver nitrate, 5 grains to the ounce, and then examining the discharge. A big dose of vaccine should be given to induce a local reaction, and some have even recommended the administration of an amount of alcohol sufficient to produce urethral congestion. One examination should never suffice; several examinations at spaced intervals are necessary, and even when every examination has been made there can be no absolute certainty as to the absence of the organism, which may lurk in so many crannies in the tract. It is sometimes possible to destroy local foci of infection by means of the operating urethroscope.

Another form of acute infection which invades the female genital tract is that which leads to pneumococcal peritonitis. The work of Fraser and others makes it fairly clear that the pneumococcus gains entry through the vagina and Fallopian tubes, and since the condition chiefly attacks girls between 5 and 10 years of age we have a clear indication for prevention—that is, to promote local cleansing and hygienic measures so as to prevent the entry of the organism. The carrying out of these measures would devolve upon those who have the care of young children, and the medical man's part is to instruct those concerned.

The prevention of intestinal obstruction is impossible in some cases, problematical in others, but easily attainable in the majority of instances. This statement may cause surprise until it is recollected that the majority of cases of intestinal obstruction are due to the strangulation of external herniae. It is clearly easy to prevent strangulation of an external hernia by undertaking a radical cure of the condition. There are three or four factors which have a bearing on the question of operation in such cases—age, reducibility, control by a truss, the position of the hernia, and the general constitutional condition of the patient.

When a hernia is strangulated operation is undertaken whatever may be the age of the patient, and in any hernia which is irreducible, painful, or prone to attacks of subacute obstruction, operation should in general be recommended irrespective of age. It can be performed under gas and oxygen combined with local anaesthesia with very

little risk to the patient. There is no definite age at which it can dogmatically be said that the sufferer is too old for operation. If a hernia is easily reducible, and can readily be controlled by a truss, the danger of strangulation is greatly reduced, and there is no need to urge operation for such herniae in people over middle age who have no strenuous work to do. If the truss does not control, then the risk of operation is no greater than the risk of strangulation.

Of the three common kinds of hernia—inguinal, umbilical, and femoral—the first-mentioned is not quite so dangerous as the other two. The explanation of this depends probably on two factors. In the first place, umbilical and femoral herniae issue through rings with hard, fibrous margins, which have no "give" in them and make reduction more difficult; secondly, there is a greater nerve supply in the inguinal region, and strangulated herniae there are as a rule much more painful than those in the other situations. It is seldom possible to overlook a strangled inguinal hernia, but not so difficult for the patient and any unobservant person to miss a small strangled femoral hernia. Again, umbilical herniae usually occur in very fat people, and sometimes a small hernia may be embedded in the fat and hardly visible on the surface. There is all the more reason, therefore, to urge operation on even small herniae in the umbilical and femoral regions so as to prevent a strangulation which might easily be overlooked until too late. There is one exception to this statement—that is, the case of any enormous irreducible umbilical hernia of long standing occurring in a feeble patient. By operating and forcing the herniated mass into the general abdominal cavity the intra-abdominal pressure may be unduly increased, with considerable shock, embarrassment of respiration, and possibly fatal result.

Herniation through a weak scar of the abdominal wall is another preventable condition. It is not always possible to prevent the occurrence of a hernia in an operation scar—though much may be done by careful suturing and the limitation of drainage—but it is certainly possible to keep an eye on the scar for some time after operation, and to detect any weakness which may be remedied in time to prevent any risk of strangulation of the abdominal contents.

Intussusception is a disease of healthy babies who are attacked about weaning time, when the change from liquid to more solid food is taking place. Such strong babies are more likely to be favoured with "a little bit of what we have" at an earlier date than the more weakly, and this may sometimes account for its occurrence even from the fourth to the sixth month. Given an ileo-caecal region which is furnished with a longer mesentery than usual, an infant whose intestinal muscle is strong and equal to vigorous peristalsis, and a large food bolus sufficient to stimulate excessively the as yet uneducated ileum, and it is not difficult to see how an intussusception is produced. Indeed, it is strange that the condition is not more common. The only factor which can in any way be controlled is that of diet. Too sudden a change should not be made in the diet of a child aged from 6 to 18 months; let the transition from liquid to solid be graduated; also, do not let solid food be given too early simply because the child is stronger than usual. See, also, that the milk-clots in the child's stomach and intestine are made small by administering some sodium citrate by the mouth. Keep the bowels open so as to avoid constipation and straining.

Many forms of intestinal obstruction are almost impossible to prevent because the preliminary symptoms are so very vague and the physical changes so slight that nothing except actual vision can determine their importance. Cancerous stricture of the gut, peritoneal pouches causing intraperitoneal herniae, strangulation by Meckel's diverticulum, and a puckering of the mesentery and intestine by the attachment of a calcified lymph gland can hardly be prevented, though intra-abdominal adhesions following operations can, to a limited extent, be prevented by care in manipulation of the intestines, reduction of drainage to the minimum, peritonizing any raw surfaces, and attending to the details of suturing the abdominal wall.

In the case of recurring abdominal pain of a subacute colicky type, however, we have the barium *x*-ray examination to help in detecting any kink or stricture in the intestines, and though this method is very much less helpful than some enthusiasts would have us believe, yet sometimes it may lead us to operate and detect obstruction before it becomes acute.

Having considered a few measures which can be taken in order to prevent the onset of acute abdominal disease, I will now briefly comment on the early diagnosis of an acute condition which has started. I could not, even if I wished, do more than skim the surface of this very important problem, but I can best provoke discussion by making an extreme statement of the surgical attitude. *There should be a time limit for the making of a diagnosis in a case of acute abdominal disease.* I do not mean to suggest that it is always possible to diagnose a case in a few hours, but I do assert that any case of severe abdominal pain which lasts for more than six hours is serious enough to merit the calling in of a surgeon—not necessarily with a view to operation, but to exclude those forms of acute abdominal disease which need prompt operative intervention if they are to be successfully treated. I particularly put in the proviso about operation, for I believe the wise surgeon is recognized as much by his knowing when to operate as by his operative skill. I hope I am not presuming when I venture to think that the surgeon sees a much greater number of acute abdominal cases than any other branch of the profession, and if he is worth his salt he should be able to give a sound opinion on those cases.

I have often been astonished by the stoicism of patients who will bear the most agonizing pain for many hours in the hope that it will subside spontaneously, and I have occasionally been surprised at the vicariously stoical attitude of some doctors when faced by a patient in pain. There are many acute abdominal pains for which a dose of morphine is the correct treatment—such, for example, as renal and biliary colic, gastric crises, diaphragmatic pleurisy with pain referred to the abdomen—but there are other conditions of an apparently similar nature for which to give a dose of morphine is, to say the least, an unwise, and, to say the most, a possibly fatal, procedure. It is generally possible to distinguish between these groups, and such a distinction should be made at as early a stage as may be done.

I have taken the time limit with reference to pain because that is the only constant symptom, but it is rare for that to be the only symptom. What I would insist upon is that any other common symptom is not to be regarded as essential. I have frequently had the statement made to me, "I did not think it could be serious because of the absence of a certain symptom"—the absent symptom varying according to the case. Now the common symptoms found in acute abdominal disease are: pain; nausea or vomiting; local tenderness; local muscular rigidity; distension; hyperaesthesia; shock; alteration of pulse, respiration, or temperature; furred tongue; constipation or obstipation; altered facies. There is hardly any absolutely constant symptom, but it may be safely asserted that pain is by far the most common, and is present in the vast majority of all acute abdominal conditions. All the others are most variable.

I think if I were asked which was the most important help in diagnosis after pain I should say altered facial appearance. I cannot describe the exact changes which the countenance undergoes, for this can only be learnt by experience, and some have great difficulty in acquiring this knowledge. To learn when a patient is really ill should be the first step in the diagnosis of acute abdominal disease, but it is astonishing how seldom this knowledge is acquired. Ward sisters often have more knowledge of this than the resident officer. There is one time, however, when the face does not help quite so much—that is, when the latent stage has supervened a few hours after the start of the disease.

*Vomiting* is frequently absent in appendicitis, often occurs only once immediately after the perforation of an ulcer, is not to be expected in obstruction of the large

bowel, and may even be absent in acute obstruction of the small intestine when gangrene quickly follows obstruction; it is not a constant symptom in the rupture of an ectopic gestation. Nausea is more constant, but not so striking a symptom.

*Distension* must never be waited for, and should not be present in the early stages except in obstruction of the large intestine. I well remember a man being sent to St. Mary's Hospital some years ago by a doctor who wrote: "Last night I thought this man very likely had a perforated ulcer, but he was not distended, so I left him alone; this morning he is distended, so I send him up to you."

*Alteration of the pulse rate* is of value when noted, but nearly every kind of acute abdominal disorder may be present without an appreciable alteration of the pulse. In some of the acute colics the pulse may be slowed; in perforated gastric or duodenal ulcer the pulse after two or three hours generally becomes quite normal; in intestinal obstruction of either the small or large intestine the pulse is frequently normal or slowed until toxaemia begins or unless there is severe shock on account of strangulation. In appendicitis I expect to find a normal pulse, unless (*a*) there is commencing peritonitis, or (*b*) the appendix is distended with toxic material. I have even known a normal pulse with acute pancreatitis, though I must admit that this is very exceptional.

I need hardly dwell on the *variability of temperature* in acute abdominal disease. A drop of several degrees accompanied by acute pain in the abdomen at once proclaims the occurrence of a catastrophe, however quickly the patient may regain a normal appearance. But many conditions cause no fall in temperature. Fever is absent in the acute obstructions, is moderate in amount and rather slow in onset in the peritoneal inflammations, and is high only in those conditions where infection is occurring in small cavities such as the pelvis of the kidney and the biliary ducts. I make it a rule in any case of acute abdomen with a temperature of 104° or 105° to turn first to the kidneys and then to the lungs and pleura.

*Constipation* is too vague a symptom to be of much use in early diagnosis. The same remark applies to furred tongue, though it is often possible to learn a lot by looking at the tongue.

An *increase in respiratory rate* must make one examine the lungs very carefully, but this increase quite often occurs in acute abdominal disease, so it is not of such great help.

*Local muscular rigidity*, though frequently referred to in the textbooks as a regular sign of appendicitis and peritonitis, should never be waited for. It is seldom present when the inflammation has not pierced through the walls of the appendix, and even when peritonitis has commenced muscular rigidity is absent when the inflammation affects a silent or undemonstrative part of the peritoneal cavity—for example, the pelvis or central part of the abdominal cavity. I wonder how many lives have been lost by ignorance of this simple fact.

We come, then, to the conclusion that the diagnosis of the presence of acute and serious abdominal disease is decided chiefly by the occurrence of pain—spontaneously complained of by the patient or elicited by local pressure on certain parts of the abdomen. The pain must be investigated from every standpoint—time of onset, character, duration, severity, position, variation in position, whether it occurs on breathing, passing urine, or defaecation. Finally, the practitioner should ask whether it is referred to any part other than the primary part, and observe how the patient turns over on to his side. Local tenderness must also be carefully sought; this examination is assisted by a careful study of the face. All other symptoms are observed, but it is generally possible to say whether the condition is serious or not by the simple observations I have described.

The doctor must make up his mind within six hours or less as to the seriousness of the condition. If he is doubtful he should not be ashamed to get a colleague to help in diagnosis. He must never procrastinate, for procrastination is the thief of lives.

# TREATMENT OF ASTHMA BY RADIATION.*

BY

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THIS disease, or rather symptom of disease, must still be regarded as an unsolved medical problem. As Professor Wild states: "Asthma is one of the most fascinating diseases for everyone except the patient." Theories have been advanced from time to time as to possible causes. The numerous so-called cures that are advocated simply indicate that no one "cure" is effective.

While not proposing to discuss the many different theories or even to advance a new one as the possible cause or causes of asthma, I will briefly outline one that is at present gaining ground, as it is helpful in explaining the effects obtained by radiation (*x* rays), administered by the method about to be described.

It is now generally accepted that asthma is not primarily a lung disease, but that some condition outside the lung is responsible for the spasm of the bronchial tubes. Abnormalities of the upper respiratory tract, such as nasal polypi; infection, such as sinusitis; chronic appendicitis; ovarian irritation; intestinal worms; the presence of cats, dogs, horses, feather cushions; the intake of certain foods, and many other agents, fantastic and otherwise, are known to give rise to an attack of asthma in different individuals. But should not these be looked upon rather as *triggers* that let off the asthmatical gun than as the primary causes of asthma? In more scientific language, do they not start a reflex, peculiar to asthmatical patients, in some organ or organs, which upsets or disturbs the metabolic or endocrine balance?—a somewhat nebulous term, but indicating a complex condition, which is best described as a loss of balance between the various ductless glands. The investigations of many workers tend to prove that one gland is, in some indefinable way, dependent on the quantity and quality of the secretion of another for its proper functioning. If a break occurs in this cycle, either a nerve reflex or otherwise, the whole balance is upset, and this is made manifest in many and various ways.

It is conceivable that each gland, when at fault, gives rise to its own particular set of clinical manifestations. Is it possible that in asthma the secretion of the suprarenal glands is defective? This somewhat speculative theory is mentioned here, for I believe that, in some manner, general radiation influences the secretion of the ductless glands. In other words, the beneficial results may be achieved by restoring the metabolic balance.

*X* rays have been used by many workers as a therapeutic agent in asthma, but the available literature on the subject shows that the results are, on the whole, disappointing. I believe two technical faults are responsible for this failure—*too small* a radiation field and *too large* a dose. The majority of authors treat only the thorax, using single front and back areas of about 10 by 15 cm. and the short wave (high voltage) therapy.[1] Others have found that some cases respond better if the spleen alone be radiated in the same way.[2] Even the skull has been radiated for this disease.

The important factors in the method of radiation about to be described are *the use of a large field and small dosage*. I wish to emphasize this combination, for, so far as I can find out by examining the literature on the subject, it has not been previously used in asthma.

As the beneficial results were discovered accidentally, it is difficult to say with certainty upon which organ or organs influence is being exercised. The whole trunk, back and front, is therefore irradiated, using the long wave therapy (low voltage). It is interesting to note that results have been obtained by radiation of the *abdomen* alone, but not by the radiation of the *thorax* only. The possible biological effects of a combined large field and small dosage have yet to be investigated, and the budding research worker should

* Read at the Second International Radiological Congress at Stockholm, 1928.

here find ample material to work upon. Might not the effects be analogous to those of sunlight carried to deeper structures? One might hesitate to bring forward yet another method for the treatment of asthma if it were not for the fact that the beneficial effects were accidentally discovered. The method, therefore, was not based on any preconceived theory; the beneficial results are undeniable.

It was while working on the problem of radiation in connexion with cancer that its effect upon asthma was first noticed. With the object of preventing metastases occurring in malignant disease, and with the possibility of stimulating Nature's defensive measures, I introduced the dual or open method of radiation some five years ago at the London Hospital. This general radiation of the whole trunk[3] has proved of such value that it is now given as a routine in all cases of cancer, in addition to any intensive local applications that may be necessary. While a patient was undergoing this treatment for malignant disease of the breast some three years ago she volunteered the statement that her asthma had thereby been cured. I was ignorant of the fact that she had been a martyr to this distressing complaint for some twenty years. The statement roused my interest, especially as there could be no question in her case of the results being due to suggestion. After considerable difficulty several cases of true asthma were recruited from among my friends. The results very soon convinced me that we had here a valuable therapeutic agent requiring investigation.

Being somewhat sceptical, it was some time before I felt justified in coming to the above conclusion. A policeman and a butcher finally turned the scale. The policeman had been discharged from the force, having been asthmatical for some ten years; his asthma had become chronic. He was blue in the face, with hardly enough breath to give his history. He came back the following week to all appearances a normal individual, and stated that he experienced relief twenty-four hours after the first treatment. He had been free from asthma for two years when he last reported himself, and was earning his living. The butcher's livelihood was threatened, as he was unable to enter the cold storage room without severe asthma; he also was cyanosed and distressed on presenting himself at the hospital. He reported after the third treatment that the cold storage room had no terrors for him.

A preliminary note on the technique was published in the *British Medical Journal* of June 5th, 1926 (p. 939). It is quite simple, once the importance of the combination of a large radiation field and small dosage is fully appreciated. Two Coolidge tubes, one focused on the back and the other on the front of the patient, so arranged that the rays cover the whole trunk, are energized by two separate installations, both tubes running at the same time. While this arrangement saves time the results are equally good if each side of the body is treated separately. The anterior tube, at 12 inches from the skin, is centred over the epigastrium, and arranged to cover an area from the chin to the symphysis pubis, and the posterior tube a corresponding area.

The short wave or high voltage therapy should *under no circumstances be used with this method*; serious damage to the patient may otherwise result. The voltage should never exceed 150,000 volts—in fact, some cases respond better if a still lower voltage is used. Aluminium filters can therefore be used with safety; 3 to 4 mm. thickness is all that is required, the latter being reserved for the heavy patients. A filter of 2 mm. will suffice when treating young children, with a correspondingly small dose.

It is strongly recommended that in addition to any indirect measurement of dosage, some *direct* method of measurement should always be utilized in low voltage work. In place of anything better, the Sabouraud pastille makes a satisfactory unit, but it *must be placed on the skin* and the tint read off by means of a tintometer. It should be noted that a quarter Sabouraud B tint, measured on the skin without a filter, is equal to a full erythema dose. A dose of 20 X through a 4 mm. aluminium filter, the maximum dose used in malignant disease, represents a double erythema dose to the skin, although it is found from actual experience that this gives rise to only a mild erythema.

The average dose used for an adult with asthma is 15 X per 3 mm. of aluminium, back and front of the trunk. This, using a 25 cm. spark-gap (points) and 8 mm. through the tube, takes on the average five minutes. In severe cases this dose is given twice a week for four doses, followed by a fortnight's rest, and then two laterally once a week. Milder cases receive the dose once a week for four doses, followed by two weeks' rest, and then two laterally once weekly. An occasional dose may be necessary after this course. Each case, however, must be treated on its merits to a certain degree, and the treatment modified accordingly.

The method has now been used for about three years. The preliminary note of the technique, published in the *British Medical Journal* of June 5th, 1926, was based on some twenty cases. The results now published are based on approximately 120 cases treated during the last two and a half years. Although the number is small, it includes all types—that is, unselected cases—and is sufficient to indicate that the treatment is of considerable therapeutic value.

To simplify matters the cases are grouped into three classes: Class A, asthma (A), subdivided into (*a*) paroxysmal, and (*b*) chronic. Class B, asthma with bronchitis (A–B). Class C, chronic bronchitis with asthma (B–A), with usually, emphysema. In Class A there were 31 paroxysmal and 19 chronic asthmatical cases treated; in Class B (A–B), 53 cases; in Class C (B–A), 18 cases. If we analyse these cases, the results are as follows:

| | Cases Treated. | No Improvement. | Slight Improvement. | Slight Recurrence. | Good Results. |
|---|---|---|---|---|---|
| Class A | | | | | |
| (*a*) Paroxysmal ... | 31 | 4* | — | 4 | 21 |
| (*b*) Chronic ... ... | 19 | — | 4 | 2 | 13 |
| Class B (A–B) ... ... | 53 | 6 | 2 | 2 | 43 |
| Class C (B–A) ... ... | 18 | 3 | 1 | 2 | 12 |
| Totals ... ... | 121 | 15 | 7 | 10 | 89 |

*Two other paroxysmal patients gave up treatment owing to nausea.

The classification should not be taken too literally. For instance, paroxysmal asthma may become chronic at certain times of the year or in one locality. Again, it is not always easy to distinguish between chronic bronchitis with asthma, and chronic asthma.

The results in Class A—namely, patients with chronic bronchitis who have definite attacks of paroxysmal asthma in addition—are only given in relation to the effect of treatment on their asthma, although, in a few cases, the bronchitis was definitely benefited. Class B, made up of asthmatics who have periodic attacks of bronchitis, gives the best results, and in many cases the attacks of bronchitis seem to become less frequent and severe. Cardiac asthmas have not been included.

Several cases of chronic bronchitis with emphysema of long standing and with doubtful attacks of asthma were given a trial course of radiation. Although no apparent improvement was noted, these patients insist that they got relief, and come up at intervals for treatment.

Of the 121 cases treated, 89 derived definite benefit. I purposely do not use the term "cure." Not knowing the cause of asthma, we cannot say if we have removed it. Some of these may yet have recurrences, as it is but three months since their last treatment. With regard to permanency, the time is too short to give a definite opinion. The longest period of freedom from asthma was in a case of twenty years' standing; this patient has now been free for two and a half years. Many have been clear for over one year. Although the age of the patients does not appear to affect the initial results, there is a tendency to recurrence in those treated under 6 years of age. The average age of those treated is 40 years. One patient in the late sixties was able, after a course of radiation, to do without his nurse, who had attended him for five years. She applied to me for a new post!

It is important to make a careful radiological examination of the thorax in all cases. Definite fibrosis of the

roots of the lungs is present in practically all asthmatics, but three patients had definite evidence of pulmonary tuberculosis—two healed and one active—all unsuspected cases. The two former were treated with good result; the latter was sent back untreated and a haemorrhage occurred a few days later. The possibility of using this method of general radiation in pulmonary tuberculosis is under consideration.

The hilum fibrosis that is common in asthma is, I believe, a secondary condition, as no alteration could be detected even after radiation had been successful. The presence of "asthmatical triggers," such as nasal polypi, infections, etc., should be sought for and removed, if possible.

In considering the value of the results it must be remembered that practically all the cases treated by radiation were those which had tried all known methods, and had been driven to the use of anti-asthmatical cigarettes, injections of adrenaline, Tucker's inhaler, etc., for relief when they became really desperate. Many patients state that their asthma originated in their abdomen—that is, the attack was preceded by some form of abdominal discomfort or indigestion. This seems to disappear if radiation proves beneficial.

Several interesting but apparently unconnected observations have been made on the after-effects of general radiation, other than on asthma. Radiation sickness or nausea was observed to a very slight degree in most cases, but bore no relation to the results. Two patients, however, proved very susceptible to the reaction, and eventually stated that they preferred the complaint to the cure. In many cases looseness of the bowels, amounting even to diarrhoea, occurred during the course. A very noticeable result in quite a number of patients was a definite increase in weight. One put on 3 lb. each week for six weeks; another as much as a stone in a month, and 3 stones in three months. Patients often state that they feel considerably better in their general health, and that they are mentally brighter. One patient lost her sense of smell with the onset of asthma three years ago. This returned after the first dose, but for a week everything seemed to have a noxious odour, becoming normal at the end of that time. The condition of her nose had been previously passed as normal. In the early stages of treatment she had a slight recurrence of her asthma, and her sense of smell was again lost, only to return later. A doctor whose work was threatened on account of asthma became quite free from attacks, but stated that the treatment had put him entirely off smoking. As he grossly overdid it this was all to the good.

A few, subject to bronchitis as well as asthma (Class C), developed what appeared to be an acute attack of bronchitis soon after treatment had been started. This may, of course, be a mere coincidence, but I mention it as a possible sequel to the treatment, although no radiation fibrosis of the lungs was noted in any case. Several patients who had been treated for nasal catarrh unsuccessfully stated that this had disappeared with the attacks of asthma after radiation.

There are a few patients who respond well at first, but have a recurrence of their asthma, which is again benefited by further radiation, but is followed by yet another attack. In such cases further investigation for asthma "triggers," such as nasal polypi, sinusitis, etc., gave no clue to the cause of these recurrent attacks.

A much larger number of cases must, of course, be treated before the true therapeutic value of this method can be gauged, and for this reason it is not presented as a new cure for asthma. The results so far obtained at least indicate that we have here a valuable palliative agent worthy of further investigation and trial by the radiologist. An Asthma Research Council has recently been formed in England. Its objects are widespread. When funds are available they will cover research in all forms—the testing of the therapeutic value of various treatments, the collecting of statistics, and so forth. It should eventually prove of very great value towards creating order out of chaos.

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## A VOCAL COMPLICATION OF TONSILLECTOMY, AND ITS TREATMENT.

BY

SIR JAMES DUNDAS-GRANT, K.B.E., M.D., F.R.C.S.

THOSE who have examined many throats after tonsillectomy must have come across cases in which the action of the soft palate has been hampered by the tightening of its lower margin. This is caused by excess of the cicatricial contraction at the site of removal of the tonsils. By delicacy and care in the enucleation such contraction may be avoided, and when it is only slight it produces no ill effects, especially if the patient is not a singer. If, however, it is more than moderate it may, in a singer, interfere very seriously with the use of the voice. The breath is apt to escape behind the palate and the tone becomes less clear, while at the same time the enunciation of the explosive consonants (B, P, T, D, K, G) may become difficult, and they may be replaced by the resonants (M, N, NG). This is the so-called *dyslalia aperta*. The vocal sound may be accompanied by an audible bruit as the air escapes through the open though narrow passage behind the palate.

Apart from care in operating, it is well to start the patient on appropriate vocal and other exercises, to get the palate into play, soon after the throat has recovered from whatever reaction may have followed the operation—say, in about a week or ten days. This is of special importance in the case of the professional singer, in whom, indeed, the operation should only be carried out after full consideration. One writer on the subject states that he generally delegates the operation to other hands than his own when the subject is a singer. Comment is needless.

The chief remedial vocal exercise consists in singing vigorously and clearly on a convenient note the sound "m-bah!" The transition from the *m* to the *b* is effected by a drawing up of the soft palate, and this is obviously the movement which has to be preserved. If difficulty is experienced in making the transition without a break, the "*bah*" may be sung without a precedent *m*.

Another simple exercise is to sing merely the sound "*ah*," and test by means of a cold mirror under the nose whether air finds its way out through the nares, revealing to the patient's own eyes the existence of a defect which has to be rectified.

Still another useful proceeding is for the patient to blow vigorously through a very narrow tube, such as a fine Eustachian catheter or a pipe-stem, or even a straw, into a tumbler of water for as long as possible without taking a fresh breath.

The palate may also be exercised by means of a small quantity of innocuous oil, such as a light liquid vaseline, poured into the nose while the patient holds his head back and abstains from swallowing. If the palate is inefficient the liquid trickles into the pharynx and larynx and excites cough.

In illustration of these points I may quote the case of a young lady who had gained a valuable scholarship for singing, being endowed with a fine voice and exceptional musical ability. For doubtless excellent reasons her tonsils had been enucleated, but unfortunately her capacity for singing was seriously affected, and continued to be so. She was referred to me three months later, and when I saw her she was in great distress, as the authorities of the college were forced to decide that unless the emission of her voice returned to its normal condition they would have to withdraw her scholarship and give it to some other candidate.

She applied herself to the understanding of the instructions, and carried them out so successfully that, to her own great satisfaction and that of the authorities, she was able to retain her scholarship and to sing better than ever, benefiting incidentally from the removal of the tonsils, which had threatened to bring her career as a vocalist to an end.

I may in this connexion refer to the question of insufficiency of the palate, to which Brown Kelly has given particular attention. This usually takes the form of a wedge-shaped gap between the two halves of the hard palate. When this is present the soft palate is not so

readily drawn up as in normal circumstances, and the nasopharynx may not be so completely shut off from the mouth as is necessary for the production of a clear singing voice. In some cases compensation is afforded by a sphincter-like action of the constrictor fibres, or even by a pad of adenoid tissue or a prominence of the atlas vertebra. The condition is fairly uncommon, but it should be kept in mind when we contemplate clearing operations in those parts.

The removal of tonsils, even in singers, is sometimes obligatory, and always accompanied by some anxiety. I feel, however, that the anxiety is considerably diminished if we realize to what extent the possible disadvantages may be removed by the intelligent use of the exercises here described.

## TREATMENT OF LUPUS ERYTHEMATOSUS WITH GOLD COMPOUNDS.

BY

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NOBODY who has attempted to treat a case of subacute lupus erythematosus with the methods available until quite recently can have failed to be impressed with the difficulty of such an undertaking. Prolonged rest in bed still holds the field as the most nearly infallible procedure, but it is obviously often impossible to persuade patients to take this drastic step.

In krysolgan I consider we have a drug which is almost specific and at the same time appears to be, with ordinary care, not dangerous. I record briefly my results in nine cases which have been treated since November, 1927, in the hope that they will encourage some of those who are still waiting to see which way this new therapeutic cat will jump. I have treated only moderately severe cases, for the reason that I did not care to pump foreign material into the general circulation of patients who were not overwhelmingly anxious to be cured, or in whom the disease was quiescent and of insignificant extent. Most of these had had previous treatment with quinine, rest, and various local applications, and some had already been treated for a short time with sanocrysin.

I may say at once that I have had no success with sanocrysin, possibly because I did not use the correct dosage. I started with 50 mg. and increased up to 250 mg. Whitehouse and Bechet,[1] who recorded four complete cures and eleven greatly improved out of thirty cases, regarded 100 mg. as a "rather large dose." I also understand that 1 gram is not considered unreasonable for the first dose in a case of active pulmonary tuberculosis. One patient received two injections of sanocrysin for a recent relapse of an old-standing lupus erythematosus, an extensive erythema centrifugum type; on her third visit, coinciding with a failure of the supply of the drug, I gave her 0.3 gram of novarsenobillon, to avoid disappointment, as she had come a long way from the country. Severe general and local reaction took place and was followed by the complete disappearance of the eruption, which has not recurred. I do not claim this case as a triumph for sanocrysin, and I mention it with the suggestion implied that intravenous injections of anything at all may cure certain cases of anything at all of an allergic nature, as is probably lupus erythematosus. However, I feel convinced in my own mind that I could not have done one-quarter as well in the following cases with any other form of treatment known to me.

I have used krysolgan in the following doses:

*First Course:* 0.075, 0.15, 0.375, 0.75, 0.75, 1, 1, and 1.25 grains.
*Second Course*: 0.75, 0.75, 1, 1, 1.5, 1.5, 1.5, and 2 grains.
*Third Course*: Four injections only of 1.5 grains each.

No unpleasant accidents occurred in a total of about 120 injections. The urine of each patient was examined three or four times, but albumin was never found, which is contrary to the experience of Nicolas and Schmitzer,[2] who found that albuminuria was constant after a total dose per course of 7 grains. The doses were given at weekly intervals with a four weeks' rest between courses.

For purposes of description I classify my cases into three groups according to the depth of involvement; one can guess roughly from the appearance of a patch what kind of a scar it will leave. Group I, erythema centrifugum type, leaving little or no scar. Group II, intermediate variety, leaving thin white supple scar. Group III, lupus erythemateux fixe, leaving disfiguring or warty scars.

*Case 1.*—A stableman, aged 43, with multiple patches of Type II; treated since June, 1926, with quinine; septic foci treated and various local remedies. He steadily became worse. Three injections of novarsenobillon produced no improvement; the same result followed twelve injections of sanocrysin. Krysolgan was started on February 24th, 1928; there was slight improvement only after one course, but no new lesions occurred. He was made much worse again by the untimely application of carbon dioxide snow. After a second course of krysolgan there was considerable improvement, but there were still about half the original number of lesions, and still active. There was no further progress after a third course; the final result being that the patient's condition was only slightly improved.

*Case 2.*—A restaurateuse, aged 59; tip of nose affected—Type II; she also had chilblains. The local application of carbon dioxide snow, after excluding oral sepsis, and four weeks' quinine treatment produced only temporary cure; she relapsed after exposure to the sun three weeks later. The lesion completely disappeared after the last injection of the first course of krysolgan. The chilblains were successfully treated with ext. thyroideum siccum, 1 grain twice daily. Still healed a month later, after half a second course had been given. Condition on June 8th, 1928—cured.

*Case 3.*—An unmarried woman, aged 28; relapse in thick white scar of previous lesion on the left cheek, also patches of Type I on neck and fingers. She showed slight improvement after one course of sanocrysin, but relapsed in a fortnight. She was nearly well after four injections of krysolgan, but two full courses were given before the patch on the cheek was completely healed. She was given a third course. Condition on June 8th, 1928—cured.

*Case 4.*—A single woman, aged 38, with active lupus erythematosus of Type III occupying the whole of the left side of the nose and part of the right batswing area. After the first course of krysolgan the whole lesion was white and showed no sign of activity. She returned after a fortnight with complete relapse, having been exposed to the sun. After waiting another fortnight she began a second course. The lesion was completely healed again after the third injection. She was still under treatment on August 30th, but appeared to be cured.

*Case 5.*—A nurse, aged 39, with extensive lesions of face and neck—Type I. After the first injection of krysolgan (0.25 grain) the eruption was only faintly visible. At the end of the first course only faint white patches of atrophy were to be seen. Four weeks later she was given a third course. Condition on July 30th, 1928—cured.

*Case 6.*—A married woman, aged 28, first seen on December 14th, 1926, with Type III lesions of tip of nose and both alae. These completely disappeared for eighteen months after rest in bed with quinine for ten weeks. After four injections of krysolgan she was much worse; it was therefore discontinued. There was no improvement after a course of sanocrysin. The lesion disappeared for two months after treatment with carbon dioxide snow, but relapsed again, and the disease is now extending. Result of treatment: no improvement; ? worse.

*Case 7.*—This patient, aged 71, edentulous, had extensive asymmetrical scarring and patches of alopecia with active lupus erythematosus of Type III at the edges of some of them. Patient complained of itching and a burning sensation. There had been no previous treatment. After one course of krysolgan no improvement was apparent, but relief of symptoms. A second course was given at the patient's request, and great improvement followed. A third course was given; there are now no signs of activity, and the scars seem to be thinner and more supple. Condition on July 20th, 1928—cured.

*Case 8.*—Patient, aged 58, was first seen on June 30th, 1926, with ulcerated, readily bleeding Type III lesions covering the whole of the nose and the left batswing area; there was also a patch on the back of the left hand. Cure for eleven months followed treatment with carbon dioxide snow and quinine. Patient returned on March 6th, 1928, with relapse on a small part of the original area. Removal of septic teeth, the administration of quinine, and further applications of carbon dioxide snow failed to bring relief. Slight improvement followed a first course of krysolgan, which was not, however, maintained through a six weeks' holiday. The condition was better after the second injection of the second course, but there was no further improvement at the end of the course. Condition on August 30th, 1928—very slight improvement. October 12th, after third course—cured.

*Case 9.*—A single woman, aged 38, with extensive lesions on the neck (Type I) and on the hands and feet (Type II). She had had relapses and spontaneous recoveries for five years. A severe attack in December, 1927, completely cleared up after treatment with krysolgan and rest in bed. She relapsed again in April, 1928. Krysolgan was recommenced in May. There was no improvement after doses of 0.375, 0.75, and 1 grain. She went away for a holiday, and returned complaining of severe pains in the back and thighs, which had followed shortly after the third injection. No organic basis could be found for these symptoms, but krysolgan was discontinued and the patient left the district. There was no improvement of the lupus erythematosus.

It may well be urged that mine is a very small series of cases, and that they have not been given nearly enough time in which to relapse, nevertheless any small success in the treatment of this disfiguring condition is acceptable to most of us, and if others are encouraged by this note to use the drug and to record their results its object will not have been missed.

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# THE DICK TEST IN SCARLET FEVER.

BY

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IT has long been recognized that streptococci have some relationship to scarlet fever, but until the work of the Dicks no convincing evidence that the streptococcus was the primary etiological factor had been adduced. Their discovery, too, of a soluble exotoxin, by which clinical scarlet fever can be produced, and which can be used as a test of susceptibility to that disease, marks an epoch in the history of our knowledge of the disease.

The present investigation is concerned with the use of the Dick test in scarlet fever patients (*a*) on admission to hospital (273 cases), (*b*) at weekly intervals during residence in hospital (239 cases), (*c*) in a series of cases dismissed from hospital some time previously (159 cases). The material used was the "Wellcome" brand diluted scarlet fever toxin (test) and heated scarlet fever toxin (control). The test consists of an intradermal injection of 0.2 c.cm. of a 1 in 1,000 dilution of filtrate obtained from a broth culture of the *Streptococcus scarlatinae*. In the interpretation of the tests pseudo and positive reactions were counted as positive, and pseudo and negative reactions as negative. This is in accordance with the custom observed by other investigators.

In group (*b*) 152 cases were treated with anti-scarlatinal serum, and in group (*c*) 76 cases had been so treated. The serum used was Burroughs Wellcome and Company's anti-scarlatinal serum unconcentrated. In over 85 per cent. of these cases this did not exceed 10 c.cm. in amount.

## DICK TESTS ON ADMISSION.

TABLE I.—*The Dick Test in 273 Cases of Scarlet Fever on Admission to Hospital.*

| Day of Disease. | Total Cases. | Percentage Positive. |
|---|---|---|
| First | 15 | 60.0 |
| Second | 69 | 73.5 |
| Third | 64 | 72.3 |
| Fourth | 53 | 68.0 |
| Fifth | 36 | 58.4 |
| Sixth | 11 | 72.7 |
| Seventh to fourteenth | 16 | 58.0 |
| Fourteenth onwards | 9 | 45.5 |

This table shows that, with the exception of the first day, there is a large percentage positive early in the disease, and that this percentage declines steadily until the sixth day, after which the numbers are too small to allow of trustworthy conclusions.

These figures compare favourably with those of Ker and his co-workers, who found 73.9 per cent. of positives during the first three days, and 68.6 per cent. in the period three to six days. Zingher obtained 98 per cent. positive during the first five days. In his paper on the subject Ker noted the disparity between his results and those of Zingher; he attributed this disparity to various causes, but especially to the greater dilution of toxin which he himself used. Lees, in an outbreak of scarlet fever in a school in Minnesota, found that fifteen out of forty-eight boys who developed scarlet fever gave a negative Dick test at the onset of symptoms. He used ten times the strength of toxin to re-test contacts, and did not obtain more positive reactions; he came to the conclusion that in this particular outbreak he was dealing with more than one strain of toxin. Various authors have reported cases of a patient being Dick-negative before developing scarlet fever. Robertson reports a case occurring in an epidemic. Nobel and Orel report one case seen by themselves and publish records of another case. I have observed the case of a nurse in hospital who was twice found to be Dick-negative and yet developed a typical attack of scarlet fever. Lees suggests that in any epidemic it would be advisable to isolate the particular strain of organism causing the disease before testing the contacts.

From the foregoing it will be seen that more accurate standardization of the toxin is necessary before complete reliability can be placed on results obtained from its use.

## WEEKLY DICK TESTS.

This series of 239 cases is divided into two groups—namely, (*a*) 87 cases not treated with anti-scarlatinal serum; (*b*) 152 cases treated with anti-scarlatinal serum immediately after their first Dick test.

TABLE II.—*Weekly Dick Tests in Patients Not Treated by Serum.*

| Week of Illness. | Total Number. | Percentage Positive. |
|---|---|---|
| First | 79 | 69.6 |
| Second | 82 | 39.02 |
| Third | 84 | 28.57 |
| Fourth | 87 | 24.13 |
| Fifth | 85 | 27.06 |
| Sixth | 66 | 21.21 |
| Seventh | 42 | 19.05 |

This table shows that there is a decline in the number of positive reactions from the first week onwards, and that this decline is most marked between the first and second weeks. There is a slight and temporary increase in the number of positives during the fifth week.

These figures indicate a steady increase in immunity. A detailed analysis does not prove this for the individual. There are wide variations. Some patients rapidly become negative and remain so. Others are positive or negative on admission and remain so during their residence in hospital. Lastly, there is a group of patients, 13 in number, who are positive on admission, become negative, and subsequently become positive again. Zingher has stated that immunity to scarlet fever is mainly antitoxic in character. Little is known of the nature of antitoxin formation, but these facts would seem to indicate that individuals vary greatly in this capacity. This has been demonstrated by Lindsay and his co-workers, while Henry and Lewis have shown that the amount of antitoxin present in the blood of convalescent scarlet fever patients is considerably greater than in normal "resistant" controls.

TABLE III.—*Weekly Dick Tests in Patients Treated by Serum.*

| Week of Disease. | Total Number. | Percentage Positive. |
|---|---|---|
| First | 144 | 69.4 |
| Second | 151 | 11.92 |
| Third | 152 | 15.78 |
| Fourth | 152 | 16.44 |
| Fifth | 140 | 28.57 |
| Sixth | 106 | 32.02 |
| Seventh | 62 | 40.32 |

The two striking features of this table are the large decrease in the number of positive reactions from the first to the second week, and the gradual increase in the number of positives from the second week onwards. Both of these are attributable to the administration of anti-scarlatinal serum. The serum confers, in the majority of cases, an immediate passive immunity, which passes off to be replaced by the acquired immunity. Trask has shown that the amount of circulating toxin early in scarlet fever varies greatly in similar cases. It is probable that in some cases the amount of antitoxin given in the serum was completely neutralized by the circulating toxin. Since the percentage of positive reactions in the later weeks is greater in the cases treated by serum than in those not treated by serum, it may safely be assumed that the administration of serum at least delays the process of natural antitoxin formation.

## OLD CASES.

It is well known that in the majority of cases one attack of scarlet fever protects the individual against a subsequent attack. It was determined to investigate the Dick reaction in patients who had been in hospital at some previous date.

1. Eighty-three patients who had had scarlet fever five years previously were Dick-tested. These cases had not been treated with anti-scarlatinal serum.

2. Seventy-six patients who had had scarlet fever nine months previously were Dick-tested. These cases had all been treated with anti-scarlatinal serum. This latter group automatically selected itself, as anti-scarlatinal serum had only been used for the first time on these cases.

Great care was taken in all these cases to ascertain by reference to hospital records that the attack of scarlet fever was genuine. Rosen and Korobicina call attention to this in one of their papers. Other workers on the results of the Dick test in patients with a history of scarlet fever have not stated that they took similar precautions.

1. In all of these 83 patients the Dick test was negative, thus indicating that they are no longer susceptible to scarlet fever. Rosen and Korobicina, in a series of 111 cases with a history of scarlet fever, obtained 23.4 per cent. of positives. However, in another series of 14 persons in whom the history was verified, they found that 2 only were positive and that these 2 had suffered from scarlet fever twenty and thirty-five years previously. It would seem, therefore, that where a history of scarlet fever is verified the Dick reaction is negative in practically every case, thus indicating immunity to scarlet fever.

2. Of the 76 cases treated by serum nine months previously, 8, or 10.52 per cent., gave a positive Dick reaction. These 8 patients had not developed their antitoxic immunity. In the present state of our knowledge of immunity to scarlet fever it is impossible to state that the positive Dick test does indicate a lack of immunity to scarlet fever. Davies of Yale, from his investigations on a similar group of cases, considers that there may be some disadvantage in the use of anti-scarlatinal serum from the point of view of subsequent immunity to the disease. It may be that second attacks of scarlet fever will become more frequent. In this connexion it is interesting to note that the only case of a second attack of scarlet fever observed by myself during the course of this investigation occurred in a girl, 6 years of age, who had been treated with serum for a mild attack four months previously. Both attacks were undoubted, and the second more severe than the first. It is too early yet to look for confirmation of this aspect of the effect of serum administration.

This investigation was carried out in the County Fever Hospital, Motherwell, during the winter 1926–27, and I am much indebted to Dr. John Reid, the medical superintendent, for facilities provided and for much helpful criticism.

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## LACERATION OF THE ANTERIOR WALL OF THE FEMALE URETHRA AND ITS REPAIR.

BY

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EXAMPLES of laceration of the posterior wall of the female urethra are relatively, though decreasingly, common in midwifery, and although tears of the anterior wall are not unknown yet the peculiarities of this case may make it worth recording.

A 5-para, aged 31, was admitted to hospital four weeks after delivery of her last child. Forceps were used and the child was stillborn. She had persistent incontinence of urine throughout her convalescence, and came into hospital with a provisional diagnosis of vesico-vaginal fistula. Albumin and pus were present in the urine.

Whilst under an anaesthetic the patient was placed in the lithotomy position. On examination the posterior wall of the urethra was found to be intact. The external urethral orifice was torn and ragged, and appeared to be dilated to about half an inch diameter. The little finger could easily be passed into the urethra, and the anterior wall was found to be torn for nearly an inch in length. This communicated with a large infected cavity behind the pubic arch, and the bare bone of the posterior aspect of the symphysis pubis could be palpated. It appeared as though the whole pelvic structures had been torn away from the pubes.

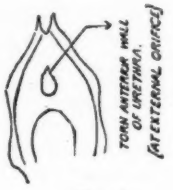


FIG. 1.

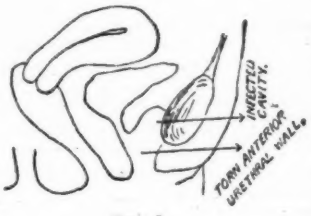


FIG. 2.

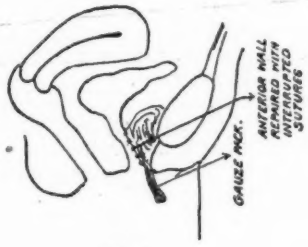


FIG. 3.

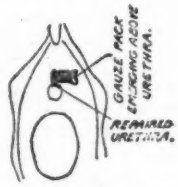


FIG. 4.

Diagrams of First Operation.

FIG. 5.

FIG. 6.

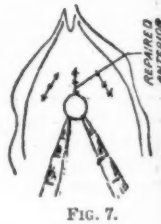


FIG. 7.

Diagrams of Second Operation.

An attempt was made to free the torn edges of the urethra, and this was repaired with interrupted catgut sutures. Three or four sutures were inserted anterior to the urethral wall in order to pull the lateral tissues somewhat together. A eusol gauze pack was placed in the cavity, the pack emerging at the vulva above the repaired urethral orifice. A self-retaining catheter was inserted into the bladder.

An evening rise in temperature occurred for four days, but was never more than 100.4°. The gauze pack was gradually decreased and the cavity closed completely, whilst the catheter was retained until the fifteenth day. For the following five days there was frequency and urgency of micturition, but no actual incontinence. Incontinence, however, did recur, and the patient was allowed to return home after two months in hospital.

She was readmitted two months later when her general condition was improved. The anterior wall of the urethra was found to be torn for about half an inch in length, and a great deal of contracted fibrous tissue was present round it. The urethra was pulled out taut and a small incision made along either side of the gaping urethra. The urethral walls were trimmed and brought together by means of interrupted catgut sutures. Two catgut sutures were put into the side wounds and a self-retaining catheter placed with some difficulty into the bladder. The catheter was retained for three days and then had to be removed. After a few days the patient had complete control over micturition; only occasional frequency occurred, and the anterior wall of the urethra healed perfectly.

I am indebted to the surgeon in charge, Dr. E. O. Croft, senior honorary surgeon to the Leeds Hospital for Women and Children, for permission to publish this case.

# SURGICAL TREATMENT OF PULMONARY TUBERCULOSIS.

BY

BERNARD HUDSON, M.D., M.R.C.P.,

SWISS FEDERAL DIPLOMA,

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(*With Special Plate.*)

THE two following cases illustrate the value of surgical treatment in pulmonary tuberculosis which has failed to respond to treatment by general methods.

CASE I.

A man, aged 33, was admitted in October, 1927, suffering from very extensive disease in the left lung. The patient obviously had long-standing disease, and had been in bed already for nearly a year before admission here. He was very ill, thin, with a considerable amount of sputum and cough, and thoroughly toxaemic. X-ray examination showed the left lung to be practically opaque, although signs of cavitation could just be detected in the upper lobe. The temperature range was very consistent, always about 100° to 101° F. each evening. Artificial pneumothorax had been attempted in England, but had failed owing to the presence of strong adhesions. It was attempted again here by me, with the same result. The condition of the right lung, although the apex was slightly affected, was very good. As the patient was obviously going downhill, a consultation was called with a view to the advisability of surgical intervention. A plastic operation was decided upon, and on November 4th an extrapleural thoracoplasty was performed in one sitting, under local anaesthesia, parts of every rib being removed.

The patient stood this very severe operation remarkably well, and six weeks after was able to get up and lead a quiet, ordinary life, for the first time for over a year. His condition after four months (March, 1928) was extremely good; he had gained two kilos in weight, and the sputum had almost ceased, what there was being tubercle negative. The temperature range was never higher than 99.2° F. (rectal) at night, and all symptoms of activity had disappeared. The patient returned to England, for urgent reasons, during the summer, and followed his profession (solicitor) in London without any ill effects at all. He returned to Davos in November, 1928, for the winter. His condition is now excellent; he weighs 86 kilograms, as against 73 a year ago. He has steadily improved since the operation.

CASE II.

A man, aged 24, was admitted in January, 1927, suffering from very widespread and active tuberculosis of the left lung, the upper lobe of the right lung being also slightly affected. The family history was particularly bad. With ordinary treatment the disease settled down to a certain extent, but was never really quiescent, and it became quite obvious that it was slowly spreading, and undermining the patient's constitution. An artificial pneumothorax was proposed six months previously, but the patient refused it, being desirous of trying the sanocrysin treatment. He had a course of this treatment with no result one way or the other. At length, in October, 1927, he consented to have an artificial pneumothorax attempted. The induction was a complete success. However, on radiographic examination after the first few fillings, it was seen that the collapse, although complete over the greater part of the lung, and at the base, was hindered at the apex by what appeared to be a strong fibrous adhesion, which was holding open a large lateral cavity. It was evident that this would not give way except by cauterization, and accordingly this was attempted on January 9th, 1928. On examination by the thoracoscope, it was seen that there were actually two large adhesions, one behind the other, each containing numerous small blood vessels. Two or three other thinner adhesions were also present.

The largest adhesion was first dealt with. A trocar was introduced by the side of the thoracoscope, and in order to obviate bleeding—a troublesome and most dangerous complication—a third of the largest adhesion was first coagulated by the diathermic cautery, and subsequently divided by the electric thermo-cautery. This procedure was continued for the middle third of the adhesion, and finally the last part was dealt with, the adhesion thus being completely divided without a single drop of blood escaping. At the same sitting a portion of the second big adhesion was treated in the same way, but, the operation having lasted about three hours, it was decided to complete the procedure at a later date. There was no reaction to speak of. Fillings were given twice weekly in order to provide as much room as possible and to stretch the adhesion, which was a very short and thick one. This and some smaller ones were dealt with a month later, in the same way as previously described, and complete collapse of the lung ensued.

The patient has never looked back, and he has had no complications (fluid, etc.) whatever. He has a filling every month, is in excellent general condition, and has gained many pounds in weight. He has no fever, and no cough or expectoration. I last saw him on November 20th. Fig. 1 shows this case after the induction of the artificial pneumothorax, but before the cauterization. It shows well the holding open of the cavity by adhesions. Fig. 2 shows the condition after the cauterization.

In the first case the ordinary treatment by rest in bed and climatic conditions proved useless, and artificial pneumothorax was impossible owing to the presence of massive adhesions. In the second case although artificial pneumothorax was performed successfully as regards the greater part of the lung, it was really unsuccessful because of the apical adhesions which held open the large cavity in the upper lobe. This partial collapse of the upper lobe was not only a hindrance to the patient's cure, but was a positive danger, owing to the presence of the widely open thin-walled cavity. In this case the operation of dividing the adhesions was extremely interesting owing to their great thickness and vascularity. The diathermic cautery was used with marked success, there being no bleeding either during the operation or subsequently.

I am indebted to Mr. P. G. Sutton, M.S.R., of the X-Ray Institute, Davos-Platz, for the radiographs.

# Memoranda:

## MEDICAL, SURGICAL, OBSTETRICAL.

### A NORMAL VENTRICULOGRAM.

(*With Special Plate.*)

THE case here described may be of some interest from the point of view of showing the normal appearance of the lateral ventricles, and the relationship of the third ventricle to the foregoing in a case of ventriculography.

The patient was a man in early middle life, who was admitted to the Maida Vale Hospital for Epilepsy and Paralysis complaining of headache and convulsions. On admission he was found to have nystagmus of the pupils, but the discs were clear. Examination of the central nervous system revealed the presence of deafness in the left ear, suggesting involvement of the eighth nerve. The tongue was protruded to the left, implicating the twelfth cranial nerve. The Wassermann reaction was negative in both the blood and the cerebro-spinal fluid.

Ventriculography, or the injection of air into the ventricles, was performed under local anaesthesia in the hope that a diagnosis might be obtained as regards the presence or absence of a cerebral tumour. Skiagrams were accordingly taken showing the ventricles anteriorly, posteriorly, and laterally. The anterior and posterior ventricles are alone referred to in this article.

In the anterior view of the ventricles the two anterior horns of the lateral ventricle are clearly seen. They are filled with air, and are closely approximated, with the third ventricle lying below. In the middle line the pineal body can be seen through the third ventricle.

In the posterior view of the ventricles it will be observed that the third ventricle has emptied itself into the lateral ventricles, and only the posterior horns of the lateral ventricles are seen; these are normally situated. The pineal body can be made out to be in the middle line.

I desire to thank Dr. W. Russell Brain for permission to use the clinical notes.

H. MARTIN GREY, M.R.C.S., L.R.C.P.,

Radiologist, Maida Vale Hospital for Epilepsy and Paralysis.

### RAPID RECOVERY FROM PLEURO-PNEUMONIA.

THE arrest of lobar pneumonia with pleurisy within thirty hours of its onset seems to be a gratifying achievement and worthy of record.

I was recently called to see a man, aged 55, whom I had attended four years previously with double pneumonia and pleurisy; from this he nearly died, but eventually made a good recovery. On November 1st, 1928, he went for a motor drive in the country and fell asleep on the ground with his coat off. He retired to bed that night feeling perfectly well, but, after a few hours' sleep, he awoke and was very restless. A little later he had a rigor and vomited, and immediately complained of shortness of breath, with a stabbing pain over the lower part of the left side of the chest, laterally and in front. A similar pain was felt over the tip of the left shoulder, and his temperature was 101.4° F. I saw him at 9.30 that morning, when his respirations were short, quick, and painful. He coughed then for the first time and brought up a lump of mucus tinged with bright red blood, the sight of which confirmed his impression that another attack of pneumonia was beginning. Examination revealed signs of consolidation of the left base, diminished vocal fremitus, an impaired note up to the angle of the scapula, diminished air entry, and distant voice sounds; a fine pleuritic rub was heard over this area and extending to the front.

He was ordered hot linseed poultices every two hours, the first of which contained mustard, and cachets four-hourly, containing half a gram each of aspirin and diuretin, and 0.12 gram of quinine. The temperature and pulse rate remained constant all

day; the expectoration was scanty, but each time contained bright red blood. He began to feel rather better, the pain became less, and he sweated profusely, but the lung signs remained about the same. I ordered a Dover's powder for the night, but he did not sleep much and the temperature was 101.5° F. and the pulse 100. At 10 the next morning he felt much better, the temperature had fallen to just below normal, and the pulse was 76; he was hungry and asked for solid food. The signs at the left base were much as before, but there was also a small patch of distant bronchial breathing and bronchophony, with crackling râles about the affected area; the pleuritic rub was still present, but less distinct. The expectoration was now more abundant and bright red intimately mixed with mucus.

From this time he steadily improved, the temperature and pulse remained normal, the bronchial breathing and bronchophony gradually diminished, the crackling râles gave place to redux crepitations, and the lung slowly, but completely, cleared up. The expectoration, however, never became rusty, but remained bright red in diminishing quantity until November 7th, when the cough and expectoration ceased. Similar cachets were given at four-hourly intervals until the temperature dropped, and were continued three times a day until November 7th.

This appears to have been a typical case of lobar pneumonia with pleurisy, the treatment being started within six hours of the onset. The temperature and pulse fell to normal within thirty hours, and the lung signs improved so that the patient was able to leave his bed on November 11th. He was on full diet and enjoyed his food from November 6th.

Valparaiso, Chile. S. M. WELLS, F.R.C.S.Ed.

## FLEXNER DYSENTERY IN A TWO-DAY-OLD CHILD.

IN view of the age of the child this case seems to be of sufficient interest to warrant publication.

A multipara after a normal confinement gave birth to a male child. The boy was perfectly healthy at birth, and was fed on the breast. Forty-eight hours after birth he began to pass loose green stools, which contained mucus and a small amount of pus, and were streaked with blood. The number of stools was not excessive, averaging two or three daily. The temperature remained normal. A portion of stool was plated out on MacConkey's bile salt lactose agar, and gave practically a pure culture of a non-lactose fermenting Gram-negative bacillus. This organism was culturally identical with *B. dysenteriae* Flexner, and was agglutinated to full titre with a polyvalent Flexner agglutinating serum. Under suitable treatment the child made satisfactory progress, and was transferred to the Aberdeen City Hospital.

The mother was regarded as the most likely source of infection, and a rectal swab was examined for the presence of dysentery organisms; *B. dysenteriae* Flexner was easily isolated. The mother had no symptoms of dysentery, and, owing to the fact that she was suffering from puerperal insanity, no history of a previous diarrhoeal condition could be elicited. She was suffering from hallucinations and delusions of persecution, and was transferred to a mental hospital.

We are indebted to Professor McKerron for permission to publish this case.

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J. M. GILL, M.B., Ch.B.,
Resident Medical Officer, Maternity Hospital, Aberdeen.

## TWIN ABORTION FROM A UTERUS DIDELPHYS.

THE following details illustrate the point that, in the country, the inaccessibility of such instruments as one does not happen to be carrying when called in may sometimes render rather mystifying an otherwise relatively straightforward case.

A married woman, aged 26, whose periods had been regular till May 8th, and ceased from this date, had pains on September 15th; a carneous mole came away two days later. The bleeding after this was not at all excessive, and the pains ceased until, early on September 20th, far more severe pains than before set in; the patient became increasingly upset and exhausted, although there was scarcely any additional bleeding. Digital examination revealed a closed os, and when this was sufficiently dilated to admit a finger the walls of the uterus felt smooth and normal so far as they could be reached. Violent bearing-down pains, however, continued. A rectal examination showed that the uterus was somewhat retroflexed, and caused a brownish discharge to pass from the vagina. On a second vaginal examination the finger entered a dilating os, and at once felt membranes presenting. After the earlier negative examinations this seemed rather puzzling, but no speculum was available nearer than my surgery some miles away. A dead foetus of about three months' gestation was delivered with its membranes.

A speculum was now obtained, and displayed a septum dividing the vagina from a little above the vulva and the uterus into anterior and posterior positions. It was sufficiently flaccid in the vagina to fall against the normal vaginal wall, and thus allowed the finger to pass sometimes into the empty anterior uterus from which the mole had been expelled and sometimes into the posterior uterus in which pregnancy had advanced two months or so further.

Penzance. R. T. BANNISTER, M.B., B.S.Lond.

## AN UNUSUAL TUMOUR.

THE following account and illustration of a tumour of uncommon appearance may be of general interest. I should be interested to hear of any similar cases and their diagnoses.

A Basuto woman, aged 66, came to me for treatment for a large "swelling." On examination I found a huge tumour mass on the left side of the chest. The whole mass was dependent from the left supraclavicular region, where it was attached to the body by a comparatively narrow "neck" of skin.

The illustration gives an idea of the size and shape of this tumour. In consistency it was soft, almost fluid, and seemed to have fibrous bands running though it in a longitudinal direction. It was covered by loose skin, which in places had broken down, and there were several old scars at the most dependent part. Over the surface there ran large veins, which were varicose.

The patient stated that the tumour began as a small swelling in 1917, and had grown steadily since then. It gives rise to no pain, but the sheer bulk makes it unsightly and oppressive. I tried to persuade the patient to have the mass removed, but so far she has not come forward for operation.

My own provisional diagnosis is that it is a lipoma, but I should be glad to have the opinion of others with a wider experience.

Buchanan Medical Mission, Qumbu, South Africa R. L. PATERSON, M.B., Ch.B.

## AN UNUSUAL CASE OF DIPHTHERIA.

THE following case illustrates, not only a curious type of diphtheria, but also the importance of confirming the diagnosis of laryngeal swellings by scientific methods before undertaking an operation or embarking upon a definite line of treatment.

A healthy-looking man, aged 55, came to see me because he had been suffering from hoarseness of the voice for five weeks. This he attributed to public speaking, since he had never felt ill.

On examination of the larynx by the indirect method his left vocal cord was found to be swollen and irregular about its centre. This swelling was white, and of the same shade of colour as the rest of the surface of the vocal cords, which were normal. His upper air passages were otherwise healthy, and his doctor could find no signs of disease in other organs. A diagnosis of intrinsic carcinoma of the left vocal cord was made. I decided to confirm this by removing a piece for section before performing the operation of laryngo-fissure for the removal of a growth which appeared to be in a favourable position for easy and complete eradication.

Accordingly, a few days later, under a general anaesthetic, I removed a piece of the growth by the direct method with Paterson's forceps. On section this specimen was reported to be old-standing diphtherial membrane.

London, W.1. H. MORTIMER WHARRY, F.R.C.S.

# Reports of Societies.

## A PARASITIC MONSTER.

AT a meeting of the North of England Obstetrical and Gynaecological Society in Liverpool, on December 14th, 1928, with the president, Mr. LEITH MURRAY, in the chair, Miss K. EDGECOMBE (Liverpool) showed a parasitic foetus removed from a female child; the patient had been apparently normal until the age of 6 months, at which time a swelling developed in the left groin, and grew rather rapidly during the next two months. There were no definite symptoms and no cachexia. Congenital sarcoma of the kidney was diagnosed, and the tumour was removed, but the child died of shock a few hours later.

The incision showed a cystic tumour lying behind the peritoneum, between the spleen and left kidney and below the pancreas. A considerable amount of mucoid fluid was removed by puncture, and the cyst was found to contain a partly developed foetus.

The foetus consisted essentially of two well-formed lower extremities, pelvis, and buttocks, three rudimentary upper extremities; and a face, the cranium being deficient. The whole foetus was covered by skin and vernix caseosa. The lower extremities were complete, showing feet, legs, thighs, and buttocks. The left foot had five toes with five nails, the second and third toes being fused; the right foot had four toes with no nails. The legs were flexed at the knee-joint and crossed, with the right leg on top of the left. The buttocks and nates were well formed, a dimple

presumably representing the anus. The vulva was well formed, the right labia were well seen, and were more prominent than those on the left side; a vestibule was present. The labia minora enclosed a cavity 7 mm. in length, 4 mm. wide, and 5 mm. deep, containing apertures presumably of the urethra and vagina. Above the pelvis there was a rudimentary abdomen; this was represented anteriorly by a deep groove, about 4 mm. in width, formed by the flexion of the head upon the pelvis and lower extremities. Posteriorly the back was well formed, extending upwards from the lower fold of the buttocks for 9 cm. Immediately above the back posteriorly and the groove-like abdomen anteriorly the head was situated. There was no thorax, but three upper extremities arose about the junction of the head and back. The right upper extremity arose from a groove between the head and the right side, 6 cm. above the right buttock; it consisted of a small wrist and a hand, on which there were four well-developed fingers, with nails, but there was no upper arm. There were two extremities on the left side; the lower one of these corresponded in position with the right hand, and consisted of a lower arm and hand with two fingers, but no nails. About 1 cm. above this the second right hand was situated, arising apparently from a groove in the head, and consisting of a hand with four well-formed fingers and nails, but no arm or forearm. The head comprised about half the foetal mass. It was acutely flexed on the abdomen, and rotated to the left side. The face was represented by a rounded fleshy protuberance on the left side, measuring 5 cm. in diameter, and separated from the rest of the head by a groove. A well-formed mouth, 1 cm. wide, was apparent in the centre of the face, showing two lips outside and definite upper and lower gums inside. There were no teeth. The other features were rudimentary, the nares being represented by two depressions, and the eyes by two similar depressions, above which, however, there were superciliary ridges with hair. The vault of the skull came behind the face, and consisted of a hairy scalp with no bony cranium. The scalp was defective in its upper portion, and was replaced by a white, glistening membrane attached to the wall of the sac. The inside of the skull was completely lined with vascular membrane, showing a well-marked tentorium cerebelli, but, owing to the deficiency of scalp, no falx cerebri. The skull had probably been filled with fluid, and there was no evidence of brain substance. Immediately behind the hairy scalp was a large, fleshy ridge, showing no definite structure, and probably corresponding to the posterior portion of the neck.

The whole foetus lay in a cyst, which was completely lined by two layers of membrane corresponding to chorion and amnion, and was attached to the surrounding structures of the host, being bounded by the diaphragm, spleen, pancreas, and kidney. The foetus had two attachments—one from the membranes forming the deficient scalp, fused with the membranous lining of the sac; the other was joined by means of a small cord from the abdominal groove to a rounded protuberance in the posterior wall of the sac. This protuberance was hollow, and contained a viscid mucoid material; it probably represented the remains of a yolk sac. The remainder of the wall of the sac was vascular, with ridges on its posterior surface. Lying immediately below and externally to the main cyst was a second smaller cyst, about 4 cm. in diameter. This contained viscid mucoid material resembling that from the yolk sac, but was apparently not connected with the main cyst. Sections had been made through various parts of the cyst and wall. The structure referred to as a cord showed a hollow vessel, resembling an artery from its thick, muscular wall, and containing red cells in its lumen, but at a small part of its circumference it was lined by columnar epithelium, resembling vitelline duct; exactly similar epithelium was found lining the yolk sac. The membranes were composed mainly of fibrous tissue, but here and there a lining membrane of flattened epithelial cells, resembling epithelium from the foetal membranes, could be traced.

Miss Edgecombe said that radiograms showed no definite bone formation. The type of parasitic foetus was that described by Ballantyne as "gastro-parasitus." He had suggested that it was formed by the inclusion of the second twin in the first during the closure of the great anterior fissure. It was a very rare occurrence, only about thirty-five to forty of this type having been recorded. In the cases traced the parasite had been of the same sex as the autosite, which pointed to a uniovular origin. The parasite in these cases usually proved fatal to the autosite, either from operation or from pressure, but cases had been recorded with an external parasite where the host had lived for many years.

### *Torsion of the Pregnant Uterus.*

Mr. LEYLAND ROBINSON and Dr. H. M. DUVALL reported jointly a case of torsion of the pregnant uterus during the eighth month in a primigravada, aged 38. The surgical anatomy of the specimen was demonstrated and the mechanism of rotation illustrated by diagrams and lantern slides.

The symptoms were atypical, but the case was regarded as one of concealed ante-partum haemorrhage, the chief clinical feature being the profound collapse which contraindicated operation. The patient died thirty hours after admission to hospital, and at the *post-mortem* examination it was found that the right gravid horn of a bicornuate uterus had undergone about 270 degrees of axial rotation. The left horn was small and not canalized, the tube being represented by the fimbriated extremity only and the ovary encased in a peritoneal fossa, somewhat resembling a teratological ovarian hydrocele. The left kidney was absent, although the corresponding suprarenal capsule was found *in situ*. There was no separation of the placenta and membranes, and the condition of the uterine muscle from the affected horn showed intense congestion but no interstitial haemorrhage. There was slight fibrosis in the liver and kidney, but no evidence of toxaemic change.

Investigation of the literature showed that this was a rare condition in the human subject and that the present case was, perhaps, the first to be recorded in England; it was, however, a common condition in veterinary obstetrics, and particularly affected the cow, which had a bicornuate uterus. From an analysis of the published cases, chiefly to be found in German literature, it was clear that torsion of the uterus was set up by three factors: (1) asymmetry, such as might be produced by the presence of tumours, or associated with a bicornuate or uni-cornuate maldevelopment of the uterus; (2) an unduly long cervix, often found with fibroids and occasionally in pregnancy, constituted a pedicle very prone to torsion, and thus acted as a strong predisposing factor; (3) irregular muscular action, due to falls and sudden movements, operated as the common exciting cause.

### *Sarcoma of the Uterus.*

Dr. M. DATNOW (Liverpool) described a specimen showing sarcomatous change in a fibromyoma.

The patient, aged 51, had been married for twenty-six years and was a 12-para. The last child had been born in 1921. There had been amenorrhoea for about nine months before admission to hospital with a gradually enlarging abdominal tumour, which grew at about the rate of a normal pregnancy. The patient was rather pale; the abdomen was distended and gave the signs of free fluid. Arising out of the pelvis was a hard, irregular tumour reaching about half-way between the umbilicus and xiphisternum; this seemed to be movable from side to side. On vaginal examination the tumour was felt to be attached to the cervix, which was drawn very high up under the symphysis. A diagnosis was made of a malignant pelvic tumour and an exploratory laparotomy was suggested, but the patient refused operation and died two days later. At the necropsy the abdominal cavity was found to contain several pints of blood-stained fluid; the bleeding appeared to have come from the necrotic-looking part to which the omentum was adherent. The uterine cavity was elongated, but the endometrium was unbroken and there was no other sign of malignancy. Sections taken from the friable portions of the tumour were composed of cells of different size and shape; many were round, some elongated and spindle-shaped, and a large number were multi-nucleated giant cells. The nuclei were very active and stained well, and the whole afforded an undoubted picture of malignancy. At a distance from the breaking-down area the sections did not contain any evidence of malignancy, and merely showed advanced degeneration. The bluish-looking fibroid showed an increased number of blood vessels as well.

Dr. Datnow said that various authorities differed as to the incidence of malignant change in fibroid. St. Andrew Kynoch (*Archiv für Gynäkol.*) had stated that if all fibroids were examined systematically 4 per cent. would be found to be sarcomatous. Kelly and Cullen had reported seventeen instances of undoubted sarcomatous change in 1,400 cases, a little over 1 per cent. E. MacDonald (*Journ. Amer. Med. Assoc.*) found seven cases in 700. Most authorities seemed to think that the frequency was between 1 and 2 per cent. On studying the tumour cells with an oil-immersion lens many of the cells in the growth had a morphological resemblance to muscle fibres. Dr. Datnow thought that this was an example of malignant change of the muscular element, and resembled very closely the case illustrated in Kelly and Cullen's book, which they described as an undoubted instance of sarcomatous change of the myomatous tissue.

Dr. Datnow also showed a specimen of sarcoma of the body of the uterus.

An unmarried woman, aged 59 years, had always been healthy except for tuberculous glands of the neck when a child. The menses commenced at the age of 16 and were quite regular up to the menopause, which occurred at 48. On admission the patient complained of a yellow vaginal discharge which had persisted for two years and had never been blood-stained. For the last four months there had been persistent vomiting and also loss of weight. Examination revealed a slightly enlarged uterus, and a diagnosis of malignant disease of the body of the uterus was made, but owing to the absence of haemorrhage it was thought wisest first to dilate the cervix and procure a section for diagnosis. After passing the first few dilators some necrotic-looking material came away which was taken as diagnostic, and abdominal hysterectomy was performed. Subsequently the patient was treated with lead,

receiving in all 0.4 gram. The patient, when last seen a month before the date of report, was quite well, except for slight pain in the right side and occasional attacks of vomiting. She had gained two stones in weight, and locally there was no evidence of recurrence. Sections of the growth were somewhat atypical, but suggested a round-celled sarcoma of rather rapid growth; several giant cells were also present.

Dr. Datnow said that the interest in the case lay in the fact that there was much constitutional disturbance, and the patient did not complain of the discharge until asked; in fact, she had been treated as a case of gastric carcinoma. In spite of the area of uterus involved it was not so enlarged as one would have expected.

### *A Hydrostatic Vaginal Plug.*

Dr. E. FARQUHAR MURRAY (Newcastle) read a note on the hydrostatic vaginal plug. He expressed the view that vaginal plugging by wool or gauze in cases of accidental haemorrhage or placenta praevia damaged the mucous membrane of the vulva and vagina and predisposed to sepsis. Efficient vaginal plugging implied the use of a retractor and movement of the patient into the cross-bed or left lateral position. The hydrostatic vaginal plug avoided these difficulties. The plug consisted of a small balloon of the type which, when distended, became sausage-shaped. It was sterilized by boiling, and distended with weak lysol solution by means of a Higginson's syringe. The amount injected would naturally vary with the case, but in general twelve "pumps" would produce a mass the size of a baby's head, and twenty "pumps" a mass which would tightly fill a female bony pelvis. As the injection was made support was given at first by the levators, but slowly the balloon would protrude at the outlet, and this was essential if it was to be an efficient plug. A little practice soon indicated how much pressure at the vaginal vault was sufficient to produce suitable counter-pressure to a tight abdominal binder. When sufficient fluid had been injected the neck of the balloon was ligatured and the syringe was removed. A broad perineal pad kept the balloon in position. Its advantages were as follows: (1) When removed many hours later the mucous membrane was still glistening and undamaged. (2) It was possible by controlling the protrusion to lessen the internal pressure sufficiently to allow examination of the cervix; after which, if still required, the internal pressure could be easily re-established. (3) Its removal was extremely easy. (4) The insertion of the plug could be effected with a minimum of disturbance to the patient.

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## SEPARATION OF THE UPPER EPIPHYSIS OF THE FEMUR.

AT a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland, on December 7th, 1928, Mr. S. T. IRWIN read a paper on separation of the upper epiphysis of the femur.

Mr. Irwin briefly reviewed the literature, and explained that this displacement was rare as the result of gross violence; he then described a case in a girl aged 11 years 11 months.

**A three months history of so-called rheumatism with pain and limp was followed by a fall on a grass tennis court. The accident produced complete loss of function, the girl being quite unable to put her weight on the limb. At first there was no shortening, but eversion of the foot, with displacement backwards of the trochanter, and swelling over the front of the joint were the prominent features. A week later there was shortening of 1/2 inch, and an *x*-ray examination revealed a typical separation of the capital epiphysis of the femur.**

He based his paper on this case and on seven others which he had had under his care. The condition occurred in about 1 per cent. of orthopaedic cases. Among children between the ages of 10 and 15 with symptoms suggestive of tuberculosis of the hip one out of every two or three might be expected to afford an example of the condition. The age was significant. Males were more affected than females, and unilateral cases exceeded bilateral by three or four to one. Traumatism was the usual causal agent, but the non-traumatic form was not rare. The symptoms and signs included preliminary pain, a limp, eversion of the foot, flattening of the hip, and limitation of all movements, especially flexion and abduction. There was no general disturbance; syphilis and tubercle were not causal agents, but endocrine disturbance was common, especially in bilateral cases in which the injury was often unrecognized if there had been one. There was at first no deformity, but after traumatism or a gross exacerbation of the pain a displacement downwards of the epiphysis occurred. The displacement continued in a downward and backward direction, the proximal end of the neck travelling upwards and forwards. The slipping might continue for months or years, but it eventually became stabilized by the epiphysis attaching its distal surface to the inner and lower aspect of the neck. Later on the upper part of the neck became rounded off, and entered into the formation of the hip-joint. At this stage the well-known deformity of adolescent coxa vara was produced, suggested simultaneously by Kocher and Hofmeister, and fully described in 1912 by Elmslie; if uncorrected before stabilization serious disability ensued due to pain, and limitation of all movements, even to the extent of complete ankylosis. Treatment by manipulation was advocated for early cases in which the epiphysis was still mobile. In recent cases with fibrous stabilization Wilson's treatment by open intra-articular operation was mentioned; for fully developed coxa vara of adolescence Wilson's intra-articular operation or extra-articular osteotomy was advised. The poor prognosis in unreduced cases was emphasized, and early diagnosis before fixation of the deformity was advocated as the only method of getting good results. A table showing differential diagnosis was prepared to indicate a comparison between pseudo-coxalgia, tuberculosis of the hip, and displaced epiphysis. A series of lantern slides and a number of pathological specimens illustrative of the paper were exhibited; these included the clinical course of one reduced case in which accurate anatomical reduction was obtained by manipulation.

The PRESIDENT, in congratulating Mr. Irwin on his interesting communication, said that the diagnosis of these cases was singularly important. He asked if there was any definite muscular spasm associated with limitation of movement or if there was any elevation of temperature.

Mr. F. J. HENRY said that the principal difficulty in cases of epiphysitis about the hip-joint was early diagnosis. He had seen a number of cases of uncomplicated irritability of the hip, described as non-tuberculous osteitis, which he thought might have been a premonitory stage of epiphysitis. He was doubtful about the treatment of such cases, because he did not like the idea of immobilizing them for any length of time, and he wondered if the prevention of weight-bearing by calliper was sufficient. He mentioned a case of true fracture of the neck of the femur in a small child, which he thought might possibly have gone unrecognized as one of those slipped epiphysis cases.

Mr. HENRY MACAULEY referred to three cases of adolescent coxa vara, in which there was limitation of abduction, with a good deal of shortening in advanced cases. In these adolescent coxa vara cases the epiphysis was displaced downwards. In the early radiograms there was usually a valgus condition of the neck seen, and in later stages there was a flattening of the neck. He said that coxa vara was a bad name to describe a condition which was a deformity of the angle between the neck and shaft of the femur.

Mr. C. J. MACAULEY drew attention to certain points in connexion with two cases of slipped epiphysis. Both patients were less than 20 years old, and in both there was a history of violence. In one case there was distinct limitation of flexion in the hip, and free movement, except for abduction and internal rotation; there was also tilting of the pelvis. The fact that the boy was able to walk about for two hours after the injury indicated that the epiphysis could not have been completely separated. A radiological examination revealed the epiphysis half-way down the exposed surfaces of the neck of the femur. Under anaesthesia he flexed the hip strongly, internally rotated it, and there followed a distinct "snap" at the hip-joint.

The other case he treated by operation after manipulative treatment had failed; he opened the hip-joint through an anterior incision, and replaced the head. Then he applied plaster-of-Paris, and later walking calliper.

Mr. IRWIN, replying, said that muscular spasm was present in early stages, but he did not think that it accounted for the limitation of movement in this condition. In some cases there was extreme limitation of movement which he could not explain. He had seen cases of displacement of both femoral epiphyses with free movement. Treatment was not responsible for the amount of movement; in a number of cases under extension there was no change in the amount of mobility. He thought that the fact that the epiphysis was forced into the cotyloid notch might explain limitation of movement in some cases. He had had no cases of extreme deformity, because he received the cases early. He referred to the age limits of the condition, and said that Perthes's disease was not present after the age of 10; it was characterized by a growth along the cartilage in the direction of the great trochanter, a break in the continuity of which would produce definite changes characteristic of Perthe's disease or pseudocoxalgia. After manipulation he found the prognosis definitely worse; unless the epiphysis was replaced arthritis would ensue. The question of the amount of shortening was interesting, and the amount remaining after reduction was very small compared with that in unreduced cases. He was doubtful of the results obtained after intra-articular operation, and thought that traumatism might occur thus inside the joint. Mr. Irwin added that non-tuberculous coxitis was not a premonitory coxa vara condition; in many of these cases staphylococci had been found.

*Syphilitic Synovitis.*

Mr. WILLIAM PEARSON showed a case of syphilitic synovitis.

The patient was a lad, aged 17, who presented none of the facial or other characteristics of congenital syphilis, and whose general health was good. When first seen he complained of a considerable swelling of the right knee-joint of five days' duration, and a larger similar swelling of the left knee, which appeared four days later, and caused some pain on attempted flexion. When at rest the joints were painless. There was no history of injury or gonorrhoea. Examination showed bilateral synovial effusion in the knee-joints. There was no tenderness or increased local heat. The right knee was moderately distended, yielding a "patellar tap"; the left knee was so tense that no "tap" could be elicited. Movements of the right knee were painless and almost full; those of the left knee were much restricted owing to the size of the effusion. Mr. Pearson said that the absence of any history of injury or gonorrhoea, the bilateral character and almost simultaneous onset, and the clinical features suggested the symmetrical serous synovitis of congenital syphilis; a blood examination yielded a fully positive Wassermann reaction. When shown the effusions had greatly diminished in size as a result of three weeks' rest, and the condition had been painless throughout.

Mr. C. J. MACAULEY said he had a similar case at present in a lad, aged 17, who came to him with chronic, rather pulpy, thickening of the left knee-joint. There was, however, no evidence of fluid; there was slight muscular wasting, and considerable limitation of flexion and extension. It appeared at first to be a tuberculous joint, but there was no increased local heat. On the following day the other knee-joint was examined, and found to be full of fluid. The difference between the two joints was that the first was thickened and the other showed a serous effusion. A Wassermann test gave a reaction of *plus* 3. The boy stated that he was a haemophilic. He was now getting better.

Mr. F. J. HENRY had had two similar cases in children. The swelling was bilateral in both, and there was a considerable lapse of time between the appearances in the two joints. The first patient, a girl, aged 7, had a large, pale effusion in the knee-joint; this was followed several months later by a similar condition in the other joint. At times the joint became perfectly dry, and a fortnight later the swelling would recur, with slight limitation of movement. Mr. Henry asked Mr. Pearson if he had noted any association between congenital syphilitic joints and interstitial keratitis.

Mr. PEARSON, replying, said that joint lesions in syphilis were extremely rare. The cases he had seen were types of arthritis secondary to synovitis, and there was osteosclerosis of the adjacent ends of bone. In these cases the disease seemed to have been continuing in the bone for years before the joint was affected; there was a nodular thickening of the gummatous type in the synovial membrane. These cases were sometimes associated with interstitial keratitis, but they were also accompanied by other signs—namely, the Hutchinson triad of symmetrical deafness, characteristic teeth, and interstitial keratitis.

*Partial Colectomy.*

Mr. J. L. KEEGAN showed two patients upon whom partial colectomy had been performed.

A woman, aged 52, was admitted to hospital with urgent symptoms of intestinal obstruction; she was collapsed, and vomited a brownish fluid; there was abdominal distension, a rapid pulse, and subnormal temperature. Caecostomy was performed on the following day; distension of the colon from the caecum to the top of the sigmoid was found, and a small lump was felt in the region of the sigmoid, with collapse of the bowel below. Three weeks later the abdomen was opened in mid-line, and a resection of the growth involving the bowel was performed, with end-to-end anastomosis. The caecostomy wound was not closed. Now, seven months after the operation, the patient was well, with daily movements of the bowel.

The second patient was a woman, aged 60, who, for six months before admission to hospital, had suffered from loss of appetite and wasting. There was no constipation till shortly before her acute illness fourteen days prior to admission, during which time she had abdominal pain and vomiting. Fourteen days prior to admission she was seized with abdominal pain, vomiting, and distension, and till her admission there was no motion. At operation the caecum was found to be so tense and distended that rupture was feared. Mr. Keegan punctured it to allow gas to escape, and, having carefully protected the peritoneum, the bowel was lifted into the wound, and a purse-string suture applied. It was then attached to the edges of the incision in the peritoneum, and through a stab wound a large rubber tube was inserted for about 2 inches in the centre of the area outlined by the purse-string. This being drawn tight, a second one was placed 1/4 inch outside the first, and the incision closed by silkworm gut above and below. Resection of the growth was performed about four weeks later, and an end-to-end anastomisis was performed. Now, more than two years since operation, the patient was quite well, with good appetite and daily motion.

Mr. Keegan concluded from his experience that the high mortality in intestinal obstruction was often due to tardiness in making a differential diagnosis; therefore laparotomy should be performed at the earliest possible moment. Caecostomy was an operation easy to perform; it gave immediate relief, arrested toxic absorption, and enabled the surgeon to operate in a comparatively aseptic area should he wish to resect the descending or sigmoid colon.

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## ARTIFICIAL TERMINATION OF PREGNANCY.

AT a meeting of the Hunterian Society, held on December 3rd, 1928, at Simpson's Restaurant, with the president, Dr. WESTERMAN, in the chair, Mr. C. LANE-ROBERTS and Mr. A. C. MACALISTER opened a discussion on the artificial termination of pregnancy. Mr. Lane-Roberts divided conditions requiring such interference into three groups—namely, disproportion, conditions threatening the life of the mother, and those threatening the life of the foetus. Cases of disproportion were best treated in an institution, and while induction of labour was often advisable natural delivery might occur, and carried a lower foetal mortality. In eclampsia there was a tendency to use hypnotics and await natural delivery rather than to induce labour. Heart disease was dangerous especially in the first half of pregnancy; if the condition of the mother was serious towards the end of pregnancy the best procedure was Caesarean section under spinal anaesthesia. The speaker hoped that the hormone oestrin would soon be available as a means of inducing delivery. Mr. A. C. Macalister said that the law had nothing to say on the subject of the artificial termination of pregnancy which could not be left to one's conscience; there were very few indications for

this procedure, which was rare in hospital practice, but common in private practice. In general, interference with pregnancy was called for only when the pregnancy endangered the life of the mother. In Tsarist Russia abortion was illegal, and was liable to be followed by exile to Siberia of the mother and the abortionist concerned; in the Russia of to-day this operation could be carried out by any reputable doctor, and special hospitals were provided for the purpose. The number of such operations carried out had increased by some 600 per cent., while the incidence of infection in such cases had fallen to about 4 per cent. Some people denied the existence of pernicious vomiting of pregnancy, others regarded it, in its early stages, as neurotic in origin, in its later stages as toxic. If such vomiting was followed by jaundice or haematemesis the pregnancy should be terminated. In cases of heart disease little benefit could be expected from a termination of the pregnancy; it was better to allow it to proceed to term, and then do Caesarean section and remove the Fallopian tubes. A history of puerperal insanity was not an indication for interference with pregnancy; such insanity was usually due to preventable causes.

## PERIODICITY IN DISEASE PREVALENCE.

AT a meeting of the Royal Statistical Society on December 18th, 1928, Mr. H. E. SOPER of the National Institute of Medical Research read a paper on the interpretation of periodicity in disease prevalence.

Mr. Soper said that the fact that epidemic diseases often came in the manner of surges, attended with great inconvenience and fraught with many special dangers when at their height, should be sufficient incentive for a close study of the fluctuations in disease prevalence. Many attempts to account for the periodic nature of the visitations of sickness had from time to time been made. It was true that the surmised mechanism of contagion, with its incalculable chances, might appear to give the lie to any possibility of a law being found which the epidemic would follow in directing its course; yet the stream flowed on through the tumult of eddies, and the fact that in a disease like measles the upheavals presented certain remarkable regularities could be taken as a challenge and a spur to the attack of the evasive problem.

Among the theories put forward to account for epidemic recurrence that most favoured presented a picture of a rise and fall in the new cases of a contagious disease as consequent upon a glut and dearth of susceptible persons; for, clearly, if there were a limit to the numbers who could contract the disease, the action might be supposed to go after the manner of a pendulum, where, as the energy of flow became exhausted, the energy of potential activity was stored up, to be released again when motion recommenced. The stored energy was the accumulation of susceptible children, by birth.

In a paper read before the Royal Statistical Society this view of the origin of the surgings of measles epidemics was taken and carried to a point a little beyond that already reached by the investigations of Sir William Hamer. It was shown, in fact, by arithmetic and algebra that a simple supposition in regard to the delayed or lapsing infectivity of an infected person, combined with a supposition of a constant inflow by birth of susceptible children, led, by invoking the statistico-chemical law known as "mass action," to an ever-sustained periodic wave, or swing of the epidemic pendulum, whose period could be interpreted. These idealized waves did not, however, give a very true replica of the curve of monthly cases of measles as presented by an actual chart, which (as shown by diagrams relating to Glasgow given in the paper) appeared to have the elements of order and chance somewhat cunningly interwoven.

Mr. Soper demonstrated that curves very similar in appearance to the curves of measles cases in Glasgow would be the foreseeable consequence of combining the natural epidemic swing with a forced seasonal impulse of a certain form, and that the form was one whose maximum coincided with fair truth with the time of assembly of schools after the summer vacation.

# Reviews.

## STUDIES ON MALARIA.

SIR RONALD ROSS'S *Studies on Malaria*[1] has been written to include in a small compass the essentials of the author's classical investigations from 1895 onwards, and it contains the essence of his larger *Memoirs* in a convenient and less expensive form. The first three chapters give a brief account of his researches in India from 1895 to 1898, which first established the development of human malarial parasites in the stomach of "dapple-winged" mosquitos (anopheles) in 1897, and the full development of the closely allied proteosoma of sparrows in mosquitos and infection through the salivary glands when they bit an uninfected bird in the following year. These investigations were unfortunately interrupted by a transfer in 1897 when war broke out on the Indian frontier, and by an investigation on kala-azar in the next year, and he was consequently prevented from tracing the full development of the human malaria in the anopheles, although he quickly did so in Freetown, Sierra Leone, a year later at the first opportunity. In the meantime, Italian workers had followed up his original discovery of the early stages in the anopheles, and completed the cycle on the lines he had demonstrated in the case of sparrow's proteosoma, and the longest chapter in the book is devoted to demonstrating his priority. As Sir Ronald Ross himself points out that the award to him of the Nobel Prize for his work on malaria, after a full investigation, sufficed once and for all to establish his claims, it is to be hoped that in a future edition this chapter will be omitted to make room for a fuller description of his early epoch-making researches, of which a much more graphic account is to be found in the author's *Memoirs* than in the present work. Most of the remaining two-thirds of the book describes the author's practical studies on malaria prevention in Freetown, Ismailia, Greece, Mauritius, and other countries, to which he has devoted so much labour; it reveals both the triumph of Ismailia and not unnatural disappointment at the failure of parts of our scattered Empire to reduce malaria as rapidly as he had hoped through the application of his methods of mosquito destruction. The author's extensive mathematical studies are frequently mentioned, but for accounts of his literary and poetic contributions his *Memoirs* must be turned to. The last chapter gives a lucid summary of the main facts about malaria, and the lay reader will find it easier to follow the earlier portions if he reads this account first. Portraits of Patrick Manson, whose help the author acknowledges, and of other workers on malaria are included in the volume, which affords a clear picture of a remarkable piece of medical research and of the many-sided genius of the man who accomplished it to the honour of English medicine.

## LIPIODOL.

THE use of the iodized oil known as lipiodol during the last few years has grown extensively, and it was well recognized that the time was ripe for the appearance of an authoritative textbook on the subject. It is particularly gratifying that the two originators of the use of this substance, Professor J. A. SICARD and Dr. J. FORESTIER, have been able to write a large volume on diagnosis and treatment by lipiodol.[2] Their bibliography extends over sixty-six pages, and this gives a clear indication of the comprehensiveness of their work. The composition and properties of lipiodol are first dealt with, followed by an account of the methods employed, with general indications and contra-indications. Then the various diagnostic uses of lipiodol are described in detail: the intraspinal and epidural routes for its introduction in diseases of the nervous system come first, followed by an account of its use in the chest, genito-urinary passages, blood vessels, nasal sinuses, digestive

[1] *Studies on Malaria.* By Colonel Sir Ronald Ross, K.C.B., K.C.M.G., F.R.S., Nobel X Laureate. London: J. Murray. 1928. (Cr. 8vo, pp. xi + 196; 4 plates. 5s. net.)

[2] *Diagnostic et Thérapeutique par le Lipiodol.* Par J. A. Sicard et J. Forestier. Paris: Masson et Cie. 1928. (Med. 8vo, pp. 370; 49 figures. 50 fr. sans majoration.)

tract, and other less important situations. Finally, there is an interesting section on the therapeutic uses of lipiodol, principally for certain muscular and joint affections, where it undoubtedly appears to be of value in relieving pain. The diagnostic use of lipiodol in diseases of the nervous system is dealt with in most detail, and the localization of the exact position of spinal tumours by the combined use of ordinary lipiodol from above and a special "light" ascending mixture of lipiodol and olive oil from below, represents one of the very important advances which the use of this substance has made possible. The volume has been printed on a good quality glazed paper, which has allowed of the reproduction of *x*-ray photographs in the body of the book. These are without exception very good and well chosen. Indeed, the only fault to be found in this excellent and authoritative work is the absence of an index—an unfortunate omission all too common in books produced in France.

DR. F. G. CHANDLER and DR. W. BURTON WOOD have written a little book on *Lipiodol in the Diagnosis of Thoracic Disease*,[3] consisting of 133 pages of text and forty-seven illustrations grouped together at the end. They describe the various methods of using lipiodol in chest diagnosis, favouring the crico-thyroid membrane route as "on the whole most satisfactory," but they omit to mention an important point in the technique, which is the incision of the skin by a scalpel before the trocar and cannula is introduced. The dangers associated with the use of lipiodol are well set out in a short chapter, and the point that curiosity alone is not an indication for its use is emphasized. The section on interpretation of *x*-ray photographs of the chest after the use of lipiodol is unfortunately separated from the very good examples grouped at the end of the book, and is probably for this reason shorter than its importance would seem to warrant.

## PROBLEMS OF THE CIRCULATION.

THE reader who looks for new observations in the Proceedings of the German Society for the Study of the Circulation[4] will be disappointed, but he will find several interesting discussions of some of the problems of the circulation. The papers read at the meetings of the society are grouped so that a small number of subjects are somewhat widely discussed from a multiplicity of aspects. The old problems of congestive cardiac failure are the subject of nine contributions. The mechanics of the blood distribution in this condition is not discussed, and one wonders if those who busy themselves with cardiac failure have sufficiently paused to consider why the venous side of the circulation becomes congested, and whether the raised venous pressure is a sequence to a failing heart or a reaction to its consequences. Eppinger directs attention to the peripheral part of the circulation where the functions of the blood are performed, and it may well be that there is to be sought the answer to our question. Dietrich supposes that the changes in the heart found at death from cardiac failure may be the *result* of a failing circulation, as the cardiac tissues are themselves supplied with peripheral vessels. Such unorthodoxy is welcome in a perplexing subject. The diagnosis of circulatory failure should be carried out, according to Hochrein, by measuring the venous pressure instrumentally. It is curious to observe how slowly the clinical side of modern English cardiology is penetrating into Europe. Cerebral haemorrhage in young people is discussed at some length, and considered to be massive diapedesis caused by functional closure of vessels. A good deal of space is given to papers dealing with the physiology of disorders of rhythm, but no new fact emerges. One paper is devoted to a classification of the various forms of high blood pressure. A case of diverticulum of the heart with transposed viscera is described, where the electrocardiogram seems to fail to confirm the dextrocardia.

[3] *Lipiodol in the Diagnosis of Thoracic Disease.* By F. G. Chandler, M.D., F.R.C.P., and W. Burton Wood, M.D., M.R.C.P. Oxford Medical Publications. London: Milford, Oxford University Press. 1928. (Demy 8vo, pp. viii + 133; 47 figures. 10s. 6d. net.)

[4] *Verhandlungen der Deutschen Gesellschaft für Kreislaufforschung.* I. Tagung. Herausgegeben von Professor Dr. Bruno Kisch. Dresden und Leipzig: T. Steinkopff. 1928. (Med. 8vo, pp. xvi + 202; 77 figures, 3 plates. R.M.15.)

## THE DUODENUM.

AN English translation has recently appeared of the volume entitled *The Duodenum*,[5] by Professor PIERRE DUVAL, Dr. JEAN CHARLES ROUX, and Dr. H. BÉCLÈRE, who for many years have collaborated in the study of this portion of the alimentary canal at the Hôpital Vaugirard, Paris. The translation is the work of Dr. E. P. QUAIN, and offers readers whose knowledge of French is limited a welcome opportunity of familiarizing themselves with the somewhat revolutionary views held by the original authors.

The French edition translated is that of 1923, but although more detailed volumes have since appeared in France, such as the two-volume work on the radiological aspects of the stomach and duodenum by the same observers, there has been no important modification of their views such as might make the present volume in any way obsolete. The most interesting part of their work is to be found in chapters ii and iii of the present volume, in which they discuss at great length the conditions described as periduodenitis and chronic duodenal ileus. In contrast to the majority of physicians especially interested in the diseases in the pyloric region, Duval, Roux, and Béclère believe that stenosing periduodenitis is not necessarily related to duodenal ulcer or to primary disease of the gall-bladder, and that it is a relatively common condition with a recognizable symptomatology. Again, they believe that an obstruction of the third part of the duodenum at the point where it crosses the pedicle of the mesentery is by no means an uncommon cause of chronic illness, and Duval has operated on many cases for the relief of these two conditions with results which are claimed to be excellent.

Surgeons and physicians in other countries have failed to confirm all the views expressed, but it is much too soon to treat them otherwise than with respectful interest, and we confidently recommend this book, with its beautiful *x*-ray photographs, to specialists not familiar with the original French literature.

## ELEMENTARY PATHOLOGICAL HISTOLOGY.

IN the excellent preface to his *Elementary Pathological Histology*[6] Mr. W. G. BARNARD says, "Pathology is concerned with processes, not with states," and, later, he suggests that inflammation would be ideally illustrated by a cinematograph film. This book is, however, only a collection of single photographs and diagrams of sections from morbid states commonly met with at necropsy. The figures are attractively arranged, and are accompanied by short explanatory paragraphs and legends, in which the frequent repetition of "showing," "are shown," "are seen," etc., is aggravating and unnecessary. The expressions "a pericarditis" and "inspired food stuff" are questionable. The termination "-oma" does not mean benign, it is an abbreviation of *ογκωμα*—a swelling; "pyknotic" is derived from *πυκνος*, meaning "firm, compact." Some sentences in the paragraph on necrosis are awkwardly expressed and obscure the meaning.

Most of the illustrations are admirable, carefully chosen, and beautifully reproduced. The figures dealing with lobar pneumonia, typhoid, and tuberculosis are especially characteristic, although in Figs. 56 and 57 (high-power views of pneumonic exudation) the cell varieties are not easily distinguishable. Fig. 43 gives a good notion of purulent bronchitis, and Fig. 34 is a useful picture of organized fibrin. On the other hand, the high-power view of fibrin net and degenerated cells of diphtheritic membrane (Fig. 53) does not convey much information, and Fig. 165 is not a satisfactory representation of tubular cubical-celled carcinoma with mucous degeneration of the stroma. The note on actinomycosis and the section shown are not helpful; there is no reference to "clubs" or "rays" from which the organism receives its name.

The book should help students to recognize histological specimens and to construct the probable history of the diseased tissue.

[5] *The Duodenum.* By Pierre Duval, Jean Charles Roux, and Henri Béclère. Translated by E. P. Quain, M.D. London: H. Kimpton, 1928. (7 × 10¼, pp. 212; 127 figures. 21s. net.)

[6] *Elementary Pathological Histology.* By W. G. Barnard. London: H. K. Lewis and Co., Ltd. 1928. (Cr. 4to, pp. 80; 176 figures on 52 plates. 7s. 6d. net.)

## THE SPECIES PROBLEM.

THE first part of *The Species Problem*,[7] by Mr. G. C. ROBSON, is devoted to an exhaustive survey of those morphological or physiological attributes which differentiate species, and a discussion of the validity of such criteria as a basis for systematic grouping. This section is mainly of academic interest, but Part II includes problems which have a more distinct bearing upon medicine. Among these may be mentioned the action of a selective death rate, the modification of germ-cells by agencies such as $x$ rays, radium, and alcohol, a review of the evidence for and against the inheritance of atrophic structure and other acquired characters, and the extent of reaction to environment. The author also discusses the relationships between structures believed to be mutually dependent during development, as, for example, primary sexual organs and secondary sex characters. The theory of "isolation" is of some interest in connexion with questions of sterility and incompatibility in mating. The term implies "any mode of separation that prevents the production of fertile offspring from the union of two distinct species"; its application is obviously limited when the human race alone is concerned. A very extensive bibliography is appended, and the text contains a wealth of data, which should make this volume a valuable source of reference.

## NOTES ON BOOKS.

DR. O'DONOVAN has done good service in *Dermatological Neuroses*[8] by emphasizing the neurological factor in many dermatoses—a factor which dermatologists who are inclined to pay attention only to what they can see have usually neglected. Apart from the detection of artefacts, in which the specialty has always been skilled, there are many cutaneous conditions in which the mentality of the patient is of the greatest importance. There are others which often seem to be induced by sudden mental shock or a period of intense nervous strain. No clinician can doubt the effect of nervous strain on the physical health of the individual, but on what organ and in what way it will act no man can prophesy. It is prone to select the *locus minoris resistentiae*, and in some individuals, more perhaps than might be imagined, this is the skin. Dermatoses so produced are almost always of a pruritic character; and, vice versa, pruritus is often amenable to suggestion of one kind or another. All these matters will be found adequately dealt with in this little volume, which should be read by every practising dermatologist and physician.

The transactions of the first National Conference of the Anti-cancer Campaign in Italy[9] include an article by Professor NICEFORO, professor of statistics in the University of Naples. The article contains some timely observations on the errors of statistical interpretation. He has noticed that such errors are frequent in the interpretation of statistics of mortality from malignant disease, and that specialists in pathology and hygiene are particularly prone to them, whether they are dealing with official figures or with data collected by themselves. It is not infrequent, for example, in comparing groups in different localities or at different periods, to disregard the difference in age composition of the groups; hence there is no real basis for comparison. The author suggests a method of standardization of the rate of mortality for malignant tumours whereby this error may be eliminated. Again, a not uncommon error arises through comparing year by year the percentage of deaths from malignant disease among deaths from all causes; it is obvious that, even if the actual number of deaths from malignant disease remained the same in two consecutive years, the percentage of such deaths would vary inversely as the number of deaths from other causes varied. Many other pitfalls are discussed by the author, and his article, which is published separately, might be usefully consulted by those embarking on statistical inquiries.

*The Principles of Chemistry and their Application*,[10] by BARTLETT and INK, is a textbook for nurses. While it seems to be intended for adult nurses who have received no training in the elementary principles of chemistry at school, it nevertheless aims at explaining matters—such as osmotic pressure and the constitution of different sugars—which cannot be understood without an adequate foundation of learning. Although portions of the text may be read by the novice with interest and enlightenment, much of the meaning must remain obscure to all but those who have been previously instructed, and we think that the time and effort needed to digest the contents of the book would be better spent in attending an ordinary course of tuition in chemistry.

After her admirable life of her husband (reviewed in our issue of September 22nd, 1928, p. 530), Mrs. BATESON has edited *Letters from the Steppe, Written in the Years 1886-1887, by William Bateson*.[11] This expedition to the Steppes of West Central Asia was planned by Bateson in order to see the processes of evolution in action, and with two distinct objects in view: first, to find marine survivals of the Asiatic Mediterranean; but this after none months' almost exclusive search did not give any positive result; and secondly, to collect the fauna of a large number of isolated waters so as to ascertain if and how much the environmental differences produce changes in the fauna; in this, as he wrote to Sir Sidney Harmer, he was successful. The letters are interestingly written, and are illustrated by a number of extempore sketches.

[7] *The Species Problem*. By G. C. Robson, M.A. Biological Monographs and Manuals. Edinburgh and London: Oliver and Boyd. 1928. (Demy 8vo, pp. vii + 283. 15s. net.)

[8] *Dermatological Neuroses*. By W. J. O'Donovan, O.B.E., M.D., M.R.C.P. Psyche Miniatures, Medical Series, No. 5. London: Kegan Paul, Trench, Trubner and Co., Ltd. (Pott 8vo, pp. 99. 2s. 6d. net.)

[9] *La Statistica Sanitaria Demografica del Cancro in Italia*. Professore Alfredo Niceforo. Milano: Stucchi Ceretti (Soc. An.). 1928. ($6\frac{1}{2} \times 8\frac{3}{4}$, pp. 123.)

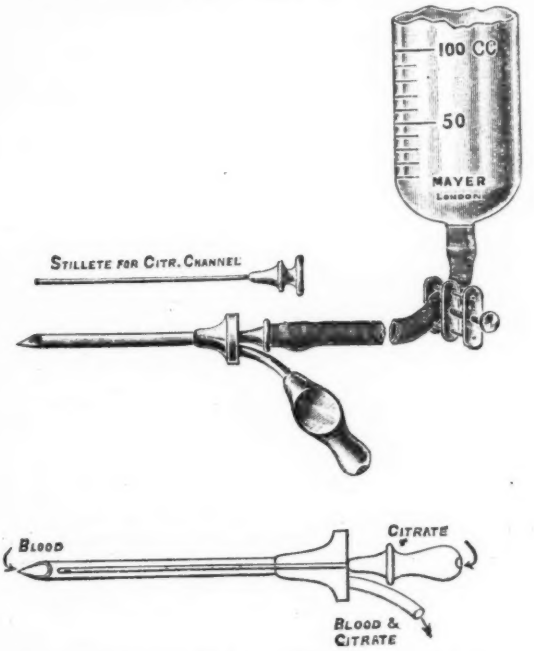
[10] *The Principles of Chemistry and their Application*. By Eleanor Hamilton Bartlett, A.B., A.M., and Katharine Ink, R.N., B.S. New York: The Macmillan Company; London: Macmillan and Co., Ltd. (Demy 8vo, pp. 418. 12s. 6d. net.)

[11] *Letters from the Steppe, Written in the Years 1886-1887, by William Bateson*. Edited, with an introduction, by Beatrice Bateson. London: Methuen and Co., Ltd. 1928. (Cr. 8vo, pp. xvi + 222; 1 portrait, 2 maps, and sketches in the text. 7s. 6d. net.)

## PREPARATIONS AND APPLIANCES.

### A NON-CLOTTING TRANSFUSION NEEDLE.

MR. O. POPPER, F.R.C.S. (London, W.1), writes: Some years ago I experienced a little difficulty in obtaining sufficient blood from a donor, owing to repeated clotting in the needle. To overcome this on future occasions I devised the needle illustrated, and as it has been successful in other hands it may be of interest. The drawings are almost self-explanatory. There is an extra channel, of very fine bore, within the lumen of the needle, which latter is of conventional shape. Through this channel a solution of sodium citrate (2 grams in 100 c.cm.) is sent. It escapes within one-eighth of an inch of the opening of the needle, thus playing within the lumen, and is washed down the needle by the donor's blood entering at the tip. A graduated Jena flask contains the citrate solution, and is connected by rubber tubing (on which is an adjustable clamp) to the previously mentioned citrate




channel. The rate of flow of citrate from the tip of the needle can be regulated in two ways: either by raising or lowering the flask, or by adjusting the clamp and fixing the flask at a constant height of about 12 inches above the vein. The latter course dispenses with the need of an assistant. With the citrate flowing freely from the tip of the needle the latter is introduced into the vein. Blood and citrate solution escape from the barrel of the needle through the separate channel illustrated, which leads to an appropriate receptacle containing a known quantity of citrate solution. The rate of flow of citrate can be reduced once free flow has been established. The actual amount of blood withdrawn is readily estimated by adding the citrate withdrawn from the flask to that originally in the receptacle and subtracting this from the total amount of fluid in the receptacle.

The instrument is made by Messrs. Mayer and Phelps, to whom I would like to acknowledge my indebtedness.

# MILK CONSUMPTION AND THE GROWTH OF SCHOOL CHILDREN.

SECOND PRELIMINARY REPORT ON TESTS TO THE SCOTTISH BOARD OF HEALTH

BY

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AND

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THE preliminary report, by Dr. J. B. Orr, on the result of the 1926-27 investigation into the feeding of a large number of school children was published in the *British Medical Journal*, January 28th, 1928 (p. 140).

The conclusions which might be drawn from that work appeared to the committee in charge of the test to be so interesting and important that it was decided to continue the investigation over a further period of equal length. That has been done, and the present report* deals with this period of the repeated test—namely, November, 1927, to June, 1928.

The seven centres at which the investigation was carried out were Peterhead, Aberdeen, Dundee, Edinburgh, Glasgow, Greenock, and Belfast. The number of children involved was 1,425. At each place four groups of children were selected, and each group treated differently. One group received whole milk, another separated milk, a third a biscuit ration of the caloric value of the separated milk, while a fourth acted as controls, receiving nothing.

The children of 13 to 14 years received 1 pint of milk daily.
The children of 9 to 10 years received 1 pint of milk daily.
The children of 6 to 7 years received three-quarters of a pint of milk daily.

All the milk was given at the schools under supervision. The whole milk was pasteurized, except at Peterhead and Aberdeen, where it was "certified." The separated milk was machine-skimmed.

Samples of all the milk given were taken monthly and sent to the Rowett Research Institute, where they were analysed. These analyses show that the average fat percentage of the whole milk was 3.85, and that of the separated milk 0.33.

### *Measurements.*

The measurements were all done by one of us (M. L. C.), and were done four times everywhere, except at Belfast, where they were done three times. As in the 1927 test the children were all weighed and measured in indoor garments and without shoes. This year the heights were recorded to the nearest eighth of an inch and the weights to the nearest quarter of a pound. To obtain a fairly accurate *average* increase in weight a careful record was made at each weighing of every article of clothing worn by the child, and from these records the average weight of clothing for boy or girl was calculated. The difference between the initial (winter) and final (summer) weight of clothing was then added to the final gross weight. In Belfast, in three schools, the children were weighed in one garment only, and the difference between winter and summer weights was, therefore, the exact increase made by the child.

To obviate fluctuations as far as possible the weights and heights were taken at the same hour of the day on each occasion, this being in the case of children receiving milk before the milk was drunk. As far as possible the schools were visited in the same rotation in order that the period between initial and final weights and heights might be identical. On each visit an accurate record was obtained for each child of all absences and illnesses. Thus the exact amount of supplementary feeding was known. Any child who had missed 25 per cent. of feeds, or showed other abnormality, was excluded when calculating the results. The number so excluded was 268.

### *Special Conditions of the Investigation.*

In considering the results of this investigation the following points should be borne in mind. The number of children involved was very large, no fewer than 1,157 being available for the measurements from which the tables are compiled. These children were divided among seven centres of population, in which the test was conducted simultaneously. Their ages ranged from 5 to 13 years, including the beginning, the middle, and the end of their ordinary school life. All the children in the six Scottish centres were living in the ordinary conditions of Scottish working-class homes, and received the ordinary diet of such homes. The milk and biscuit given to them at the schools were therefore in the nature of a *supplementary ration to their home food*. The results, consequently, must be regarded as the effect of the addition of definite quantities of milk to the average home diet of children of school age living in ordinary working-class conditions in industrial centres. It would appear to be justifiable to infer that the same results, whatever they may be, would apply to the whole school population living their ordinary life. Those conditions, from the standpoint of a nutritional investigation, are, of course, very complicated, but this test was so devised as to bring out any *significant* differences which might arise within the limits laid down.

The following three tables show the total results of the investigation.

TABLE I.—*1928—Increases: Milk versus Non-milk Groups and Percentages.*

| | No. of Children. | Height Increase. | Weight Increase. |
|---|---|---|---|
| 13-year Groups: | | | |
| Milk ... ... ... ... | 137 | 1.4699 in. | 5.6387 lb. |
| Non-milk ... ... ... | 133 | 1.1908 ,, | 4.2368 ,, |
| | | = +0.2791 in. | = +1.4019 lb. |
| | | or 23.44% | or 33.09% |
| 9-year Groups: | | | |
| Milk ... ... ... ... | 188 | 1.3941 in. | 3.4701 lb. |
| Non-milk ... ... ... | 212 | 1.1068 ,, | 2.0695 ,, |
| | | = +0.2875 in. | = +1.3707 lb. |
| | | or 25.98% | or 66.23% |
| 6-year Groups: | | | |
| Milk ... ... ... ... | 242 | 1.5021 in. | 2.5331 lb. |
| Non-milk ... ... ... | 245 | 1.2758 ,, | 1.8531 ,, |
| | | = +0.2263 in. | = +0.6800 lb. |
| | | or 21.16% | or 36.70% |
| All Age Groups: | | | |
| Milk ... ... ... ... | 567 | 1.4585 in. | 3.5776 lb. |
| Non-milk ... ... ... | 590 | 1.1810 ,, | 2.4610 ,, |
| | | = +0.2775 in. | = +1.1165 lb. |
| | | or 23.50% | or 45.37% |
| 1927 increases (Scotland—all ages): | | | |
| Milk ... ... ... ... | 551 | 1.470 in. | 3.617 lb. |
| Non-milk ... ... ... | 731 | 1.212 ,, | 2.974 ,, |
| | | = +0.258 in. | = +0.643 lb. |
| | | or 21.29% | or 21.62% |

From this table it is seen that, taking all the ages combined of the 1,157 children and dividing them into milk-fed groups and non-milk-fed groups, there is an average increase in height of 23.5 per cent., and in weight of 45.37 per cent., in favour of the milk-fed groups over the non-milk-fed groups.

It is also seen that these increases are greater in this second and repeated test than they were in the first (1927) test.

* Owing to the death of Dr. L. Cruickshank and to the absence of Dr. J. B. Orr abroad, it was decided to place the organization of the second investigation in the hands of Dr. Gerald Leighton, Medical Officer of Foods, Scottish Board of Health. This also enabled the Board's wide knowledge of the nutrition of school children and the implications of such in connexion with public health to be more readily utilized.

TABLE II.—*1928—Increases in Age Groups.*

| | No. of Children. | Height Increase. | Weight Increase. |
|---|---|---|---|
| **13-year Groups:** | | | |
| Whole milk ... ... | 68 | 1.4540 in. | 5.5662 lb. |
| Separated milk ... ... | 69 | 1.4855 ,, | 5.7101 ,, |
| Biscuits ... ... ... | 67 | 1.1194 ,, | 4.4179 ,, |
| Controls ... ... ... | 66 | 1.2633 ,, | 4.0530 ,, |
| | 270 | | |
| **9-year Groups:** | | | |
| Whole milk ... ... | 105 | 1.4238 in. | 3.5333 lb. |
| Separated milk ... ... | 83 | 1.3569 ,, | 3.2771 ,, |
| Biscuits ... ... ... | 101 | 1.1077 ,, | 2.0396 ,, |
| Controls ... ... ... | 111 | 1.1059 ,, | 2.0586 ,, |
| | 400 | | |
| **6-year Groups:** | | | |
| Whole milk ... ... | 121 | 1.5589 in. | 2.7107 lb. |
| Separated milk ... ... | 121 | 1.4452 ,, | 2.3554 ,, |
| Biscuits ... ... ... | 115 | 1.2424 ,, | 2.1609 ,, |
| Controls ... ... ... | 130 | 1.2375 ,, | 1.5808 ,, |
| | 487 | | |
| **Total number ...** | 1157 | | |

This table shows the increase in height and weight in all the age groups, with the number of children in each group. In every case the milk-fed children are ahead of the "biscuit" and "control" groups. The greatest increase in height is in the 6-year-old milk-fed group. The greatest increase in weight is in the 13-year-old separated milk group. The difference between the "biscuit" group and the "controls" is but slight, except that the 13-year-old controls did better in height but not so well in weight. In the 6-year-old group the "biscuit" group is better in weight than the "controls."

Those familiar with the manner in which statistics of this kind are worked out will be aware that, in order that the difference between two groups and figures may be regarded as "significant," that difference must be at least three times as great as the "probable error." The results in this table are calculated on that basis.

In Table III there is set forth the mean increase in pounds and inches (that is, for weight and height) in each group at each age, together with the probable error involved and the significance or otherwise of the differences.

### *Other Observations.*

In addition to the foregoing statistical observations, two other lines were adopted which cannot be stated in figures.

Dr. C. A. Douglas examined all the children clinically when they were measured. Her report states that "in practically every case it was noted that the children receiving milk showed, even where there was obviously poor maternal care, that sleekness peculiar to a well-nourished animal. Their hair had a glossy and bright appearance. Their nails were smooth, resilient, and looked as if polished. General alertness was common to all the children fed on milk. No difference could be detected with regard to these points between the children receiving milk irrespective of the kind of milk. It was gathered from teachers and janitors that the children receiving milk were much more alert and very much more boisterous and difficult to control than the others. This latter fact was only too evident when they were waiting in small groups to be weighed."

TABLE III.—*1928 Nutrition Test.*

| | | | | Increase I. | Increase II. | Difference. | Probable Error. | Result. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| **A.—13 Years: Weights (Increases in Pounds).** | | | | | | | | | |
| Whole milk | (68) | *v.* Separated milk | (69) ... | 5.5662 | 5.7101 | −0.1439 | 0.2979 | −0.483 | Insignificant. |
| | | *v.* Biscuits | (67) ... | ,, | 4.4179 | +1.1483 | 0.3080 | +3.728 | Significantly better. |
| | | *v.* Controls | (66) ... | ,, | 4.0530 | +1.5132 | 0.2816 | +5.374 | ,, ,, |
| Separated milk | (69) | *v.* Biscuits | (67) ... | 5.7101 | 4.4179 | +1.2922 | 0.3400 | +3.801 | ,, ,, |
| | | *v.* Controls | (66) ... | ,, | 4.0530 | +1.6571 | 0.3163 | +5.239 | ,, ,, |
| Biscuits | (67) | *v.* Controls | (66) ... | 4.4179 | ,, | +0.3649 | 0.3258 | +1.120 | Insignificant. |
| **B.—Heights (Increases in Inches).** | | | | | | | | | |
| Whole milk | (68) | *v.* Separated milk | (69) ... | 1.4540 | 1.4855 | −0.0315 | 0.0424 | −0.743 | Insignificant. |
| | | *v.* Biscuits | (67) ... | ,, | 1.1194 | +0.3346 | 0.0431 | +7.763 | Significantly better. |
| | | *v.* Controls | (66) ... | ,, | 1.2633 | +0.1907 | 0.0444 | +4.295 | ,, ,, |
| Separated milk | (69) | *v.* Biscuits | (67) ... | 1.4855 | 1.1194 | +0.3661 | 0.0453 | +8.081 | ,, ,, |
| | | *v.* Controls | (66) ... | ,, | 1.2633 | +0.2222 | 0.0466 | +4.768 | ,, ,, |
| Biscuits | (67) | *v.* Controls | (66) ... | 1.1194 | ,, | −0.1439 | 0.0472 | −3.049 | Significantly worse. |
| **C.—9 Years: Weights (Increases in Pounds).** | | | | | | | | | |
| Whole milk | (105) | *v.* Separated milk | (83) ... | 3.5333 | 3.2771 | +0.2562 | 0.1468 | +1.745 | Insignificant. |
| | | *v.* Biscuits | (101) ... | ,, | 2.0396 | +1.4937 | 0.1314 | +11.114 | Significantly better. |
| | | *v.* Controls | (111) ... | ,, | 2.0586 | +1.4747 | 0.1360 | +1.843 | ,, ,, |
| Separated milk | (83) | *v.* Biscuits | (101) ... | 3.2771 | 2.0396 | +1.2375 | 0.1403 | +8.820 | ,, ,, |
| | | *v.* Controls | (111) ... | ,, | 2.0586 | +1.2185 | 0.1419 | +8.587 | ,, ,, |
| Biscuits | (101) | *v.* Controls | (111) ... | 2.0396 | ,, | −0.0190 | 0.1290 | −0.147 | Insignificant. |
| **D.—Heights (Increases in Inches).** | | | | | | | | | |
| Whole milk | (105) | *v.* Separated milk | (83) ... | 1.4238 | 1.3569 | +0.0669 | 0.0261 | +2.563 | Not quite significant. |
| | | *v.* Biscuits | (101) ... | ,, | 1.1077 | +0.3161 | 0.0281 | +11.249 | Significantly better. |
| | | *v.* Controls | (111) ... | ,, | 1.1059 | +0.3179 | 0.0263 | +12.087 | ,, ,, |
| Separated milk | (83) | *v.* Biscuits | (101) ... | 1.3569 | 1.1077 | +0.2492 | 0.0237 | +10.515 | ,, ,, |
| | | *v.* Controls | (111) ... | ,, | 1.1059 | +0.2510 | 0.0215 | +11.674 | ,, ,, |
| Biscuits | (101) | *v.* Controls | (111) ... | 1.1077 | ,, | +0.0018 | 0.0239 | +0.075 | Insignificant. |
| **E.—6 Years: Weights (Increases in Pounds).** | | | | | | | | | |
| Whole milk | (121) | *v.* Separated milk | (121) ... | 2.7107 | 2.3554 | +0.3553 | 0.1112 | +3.195 | Significantly better. |
| | | *v.* Biscuits | (115) ... | ,, | 2.1609 | +0.5498 | 0.1020 | +5.390 | ,, ,, |
| | | *v.* Controls | (130) ... | ,, | 1.5808 | +1.1299 | 0.1031 | +10.959 | ,, ,, |
| Separated milk | (121) | *v.* Biscuits | (115) ... | 2.3554 | 2.1609 | +0.1945 | 0.1055 | +1.844 | Insignificant. |
| | | *v.* Controls | (130) ... | ,, | 1.5808 | +0.7746 | 0.1066 | +7.265 | Significantly better. |
| Biscuits | (115) | *v.* Controls | (130) ... | 2.1609 | ,, | +0.5801 | 0.0969 | +5.987 | ,, ,, |
| **F.—Heights (Increases in Inches).** | | | | | | | | | |
| Whole milk | (121) | *v.* Separated milk | (121) ... | 1.5589 | 1.4452 | +0.1137 | 0.0250 | +4.548 | Significantly better. |
| | | *v.* Biscuits | (115) ... | ,, | 1.2424 | +0.3165 | 0.0243 | +13.025 | ,, ,, |
| | | *v.* Controls | (130) ... | ,, | 1.2375 | +0.3214 | 0.0250 | +12.856 | ,, ,, |
| Separated milk | (121) | *v.* Biscuits | (115) ... | 1.4452 | 1.2424 | +0.2028 | 0.0221 | +9.176 | ,, ,, |
| | | *v.* Controls | (130) ... | ,, | 1.2375 | +0.2077 | 0.0228 | +9.110 | ,, ,, |
| Biscuits | (115) | *v.* Controls | (130) ... | 1.2424 | ,, | +0.0049 | 0.0221 | +0.222 | Insignificant. |

Dr. G. W. Simpson made a different observation. He asked the headmasters to parade the children in their respective groups, he himself being unaware which group was milk-fed or otherwise. From this general survey he placed the groups in order of apparent standard of nutrition. Of five examinations thus made he found that first places of nutritional standard were accorded to three whole milk and two separated milk groups. Second places were accorded to two whole milk and three separated milk groups. Third places were accorded to all five biscuit groups, and fourth places to all five control groups. "The difference in nutrition between groups receiving milk and not receiving milk was plainly evident. No great difference was noticed between the whole milk and separated milk groups." A sixth examination did not correspond with the other five, but in this case the best nourished children had been selected as controls, while those apparently needing the milk most were put into the milk groups. The desired conditions for observation were thus not fulfilled.

### *A Test Reversed.*

One very interesting result came out in this repeated investigation. In order to ascertain what would occur two of the previous feeding groups were reversed. A group which in the first investigation received separated milk now received biscuit. Another group which in the first investigation were "controls" now received whole milk. The general result in both cases was that they changed places, the former milk group now receiving biscuit fell to biscuit standard, while the former "control" group now receiving milk rose to the milk standard. Table IV shows the detailed results of this reversed test.

TABLE IV.—*Groups Reversed.*

| | Average Increase in Height (inches). | | Average Increase in Weight (lb.). | |
|---|---|---|---|---|
| | 1927. | 1928. | 1927. | 1928. |
| GLASGOW. | | | | |
| 5-year-old children: | | | | |
| Separated milk 1927; biscuits, 1928 | 1.500 | 1.351 | 2.407 | 2.212 |
| Biscuits, 1927; separated milk, 1928 | 1.101 | 1.454 | 2.234 | 2.237 |
| 8-year-old children: | | | | |
| Separated milk, 1927; biscuits, 1928 | 1.297 | 1.213 | 3.471 | 2.063 |
| Biscuits, 1927; separated milk, 1928 | 1.089 | 1.333 | 2.266 | 3.207 |
| GREENOCK. | | | | |
| 5-year-old children: | | | | |
| Whole milk 1927; controls, 1928 | 1.543 | 1.163 | 1.994 | 1 875 |
| Controls, 1927; whole milk, 1928 | 1.470 | 1.479 | 1.595 | 2.639 |

The following table shows similar details for the other areas (groups not reversed).

TABLE IVA.—*Groups Continued.*

| | Average Increase in Height (inches). | | Average Increase in Weight (lb.). | |
|---|---|---|---|---|
| | 1927. | 1928. | 1927. | 1928. |
| PETERHEAD. | | | | |
| 5-year-old children: | | | | |
| Whole milk ... ... ... | 1.550 | 1.384 | 2.741 | 2.569 |
| Separated milk ... ... ... | 1.568 | 1.356 | 2.983 | 2.576 |
| Biscuits ... ... ... ... | 1.392 | 1.270 | 1.973 | 2.188 |
| Controls ... ... ... ... | 1.425 | 1.311 | 1.773 | 2.048 |
| DUNDEE. | | | | |
| 8-year-old children: | | | | |
| Whole milk ... ... ... | 1.105 | 1.197 | 2.556 | 3.205 |
| Separated milk ... ... ... | 1.209 | 1.347 | 2.659 | 3.070 |
| Biscuits ... ... ... ... | 0.931 | 1 054 | 2.404 | 2.738 |
| Controls ... ... ... ... | 0.572 | 1.156 | 2.433 | 1.911 |
| EDINBURGH. | | | | |
| 8-year-old children: | | | | |
| Whole milk ... ... ... | 1.483 | 1.429 | 3.330 | 4.057 |
| Separated milk ... ... ... | 1.457 | 1.383 | 3.238 | 3.531 |
| Biscuits ... ... ... ... | 1.285 | 1.031 | 2.972 | 1.650 |
| Controls ... ... ... ... | 1.221 | 1.100 | 2.132 | 2.438 |
| GREENOCK. | | | | |
| 5-year-old children: | | | | |
| Separated milk ... ... ... | 1.625 | 1.443 | 1.969 | 2 243 |
| Biscuits ... ... ... ... | 1.455 | 1.131 | 1.200 | 2.050 |

### *Conclusions.*

As the result of this repeated investigation (1927-28), it may be said at once that the tentative conclusions drawn by Dr. J. B. Orr from the first investigation were more than justified.

The great value of an additional milk ration to that already taken at home is clearly demonstrated for all ages of school children.

In the repeated test the average increase in height in the milk-fed groups in all ages combined is actually *1.21 per cent. more than in the first test.* The average increase in weight in the milk-fed groups in all ages combined is no less than *3.75 per cent. more than in the first test.* Not only have the same milk-fed children benefited again, but they have done so to a greater extent than before. Their initial improvement has *continued over the second year.*

Once more the value of separated milk for children of school age is shown. In most groups the difference in height and weight between the whole milk and separated milk groups is not "significant," but in the six-year-old group whole milk is "significantly" better than separated for both weight and height. In every case the whole milk and separated milk groups are better than the "biscuit" or the "controls." In this repeated test the difference between the "biscuit" and the "controls" is usually "insignificant"; the effect of the extra biscuit appears almost negligible. The improvement of the milk-fed groups in general health and appearance is clearly brought out in the reports of Dr. C. A. Douglas and Dr. G. W. Simpson. Many of the teachers have recorded similar opinions.

When these results are considered, along with those published by Dr. Corry Mann in this country and those of observers in other countries, the only conclusion possible is that they have a wide public health significance, especially with the nutrition of school children.

"In 1903, when the Royal Commission on Physical Training (Scotland) issued their report, two things became clear: first, that medical examination and superintendence were essential conditions of any system of physical education; second, that in the end *the fundamental problem is one of nutrition. . . .* When every preventable ailment is prevented, and every serious disease treated to its finish, the new battalions of children coming forward have to be superintended from the nutritional standpoint." (Sir Leslie Mackenzie.) The two reports of this investigation fully substantiate these views.

### *Committee of Investigation.*

The investigation was conducted under the direction of a committee appointed by the Scottish Board of Health with Sir Leslie Mackenzie as chairman. The members consisted of the school medical officers for the cities and towns where the work was carried out.

We desire to thank Dr. J. F. Tocher, Aberdeen, and Mr. J. S. Thomson, Rowett Research Institute, for advice and help on the statistical side of this investigation.

The results of the investigation have also been submitted from time to time to Professor A. P. Cathcart, chairman of the Nutrition Committee of the Medical Research Council.

The cost of the investigation was defrayed by a grant made by the Empire Marketing Board to the Rowett Research Institute, Aberdeen.

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THE seventh issue of the *Medical and Scientific Archives of the Adelaide Hospital* contains records of various cases of general interest, and a tabulation of certain lesions found during the course of 1,000 necropsies performed between 1920 and 1925. In this survey the conditions dealt with include diseases of the vascular system, the digestive system, the female generative tract, and the ductless glands; in the *Archives* of the previous year data were given for all neoplasms. The hope is expressed that the material thus tabulated will prove of value to those engaged in research work who require references to the occurrence of peculiar lesions. Any particular case can be followed up, fuller details being obtainable on application to the registrars at the Adelaide Hospital. It is suggested that unexpected associations between various lesions may be brought out in this way, and that if similar statistics were to be made at large hospitals throughout the world, a very important mass of information would be made available.

British Medical Journal.

SATURDAY, JANUARY 5TH, 1929.

## THE TEACHING OF FORENSIC MEDICINE.

IT will hardly be denied that in Great Britain, and more especially in England, we are far behind the times in the teaching and practice of forensic medicine. England and Scotland possess between them fourteen universities with faculties of medicine, besides many fully developed institutions for medical education; yet only two teachers devote themselves entirely to forensic medicine—the regius professors of this subject at Edinburgh and Glasgow. Elsewhere, even in London, forensic medicine is taught by men whose livelihood and interests are essentially in other directions, or who have retired from more active practice. In some medical schools the remuneration is so poor that the lecturer may be almost out of pocket at the end of his teaching sessions. Small wonder that in such circumstances the community has no trained body of men to call upon.

There have been many illustrations in recent years of the need for expert investigation. The general practitioner, who is frequently called upon to make *post-mortem* and other examinations in criminal cases, does not profess to know much of the subject, and is therefore disinclined to undertake this duty. The same remark applies in general to the ordinary pathologist without any special forensic training. It is true that in most cases he can ascertain the cause of death, but he is often unfamiliar both with the requirements of the authorities and with other medico-legal observations which may play a vital part in the conduct of the case. As long as those in authority in this country are content to carry on with "untrained experts" little improvement in the teaching or the standard of knowledge is to be expected. The first need is for public authorities to realize that medico-legal work of this kind requires special training, and that expert investigations are necessary, not only for the detection of crime, but often also for the protection of accused persons. With the call for experts will come an improvement in the standard of teaching. In order to give adequate instruction the teacher should be engaged in the actual practice of his subject, and have at his disposal ample material for demonstration and research. From the special nature of the subject it follows that the practical material which is needed for a teaching institute and from which expert research receives its stimulus can only come to the institute from the public authorities.

The ninth series of the valuable *Methods and Problems of Medical Education*,[1] which the Division of Medical Education of the Rockefeller Foundation started in 1924, is entirely devoted to institutes for forensic medicine. Here will be found information about the teaching of this subject in seventeen countries—namely, Austria, Canada, Cuba, Czechoslovakia, Denmark, Egypt, France, Germany, Hungary, Italy, Poland, Portugal, Rumania, Scotland, Sweden, Switzerland, and the United States of America. The articles, which are generously illustrated with plans and photographs of the laboratories and *post-mortem* rooms, appear in English, German, or French. They contain much interesting historical information, and at the same time furnish evidence of the rapid strides that this subject is making on the continent of Europe, as shown by the recent erection of medico-legal institutes. Professor Knud Sand of the University of Copenhagen traces the development of medico-legal practice from classical times, and pays a tribute to the German and French pioneers. Professor John Glaister, whose chair in Glasgow dates from 1839, describes some of the recent research work that has been carried out in his department. Forensic medicine was first taught to medical students in Great Britain in 1791 by Andrew Duncan, sen., professor of medicine at Edinburgh; and it owes much to subsequent teachers in that university, especially Sir Robert Christison, Sir Henry Littlejohn, and his son and successor in the chair, the late Harvey Littlejohn. In Poland the University of Cracow has had a chair of legal medicine since 1804, and the institute, started in 1834, has occupied new quarters since 1895. In Rumania the practice of legal medicine is said to have reached the highest degree of perfection, and the claim is made by Professor Mina Minovici that it was the first country to establish an institute, thirty-six years ago. But according to Professor Cesare Biondi the institute in Siena has been in existence for over a century, and Professor Fritz Reuter says that Austria was the first to establish an institute of legal medicine—that founded in Vienna in 1804. It seems, therefore, that the word "institute" is somewhat differently interpreted in different countries. In Turin University the Institute of Legal Medicine and Criminal Anthropology has been on its present site for just over thirty years, having previously occupied small quarters, containing Lombroso's splendid criminal collection, in a building close to the university.

The departments or institutes of legal medicine reviewed in the Rockefeller report mostly fall into two groups: those which are part of a State medical service, as in Denmark, Egypt, Rumania, and other countries, and those in which the school relies on the personality and experience of its teacher and the goodwill of the local authorities to bring cases and material to its institute. In Paris the authorities have realized the advantage and economy of a properly conducted service. The State, the city of Paris, and the university have combined to share the effort. The university supplies the expert staff, the lay staff and the establishment are under the police, and the State contributes financially. The vast resources and material of a great city are thus available for teaching and research. Other large European cities also have central institutes where, in addition to much research, a thousand or more medico-legal necropsies are performed annually. In the medical schools of this country, on the other hand, while material is available here and there through the goodwill of local authorities, the great bulk of students pass through their curriculum without any practical instruction, and post-graduate courses in forensic medicine do not exist.

The neglect of this branch of medicine in our universities and schools is much to be deplored on every ground. We have already indicated our view that progress must depend on two things—the supply of adequate material for teaching, and recognition by the lay authorities that special training and study is needed before a man is competent to undertake responsible investigations affecting the safety of the individual and of the public. From these would follow in due course the organization and supplementing of the medico-legal resources of the country. The teaching

[1] *Methods and Problems of Medical Education.* (Ninth series.) New York: The Rockefeller Foundation. 1928. (Imp. 8vo, pp. 386; illustrated.)

bodies would then be in a position to avail themselves of the assistance and co-operation of the local official expert both in the providing of material and in the practical instruction of their students. In the United States also there appears to be room for much improvement in the medico-legal service, and the need for fully equipped institutes has been plainly stated by our contemporary the *Journal of the American Medical Association*.[1] "Probably the most significant advance in this field so far in the United States is the change from the cumbersome and archaic system of coroner to the much more effective system of medical examiner, which has been made in Massachusetts, New York, and New Jersey, and which should be introduced as rapidly as possible in other States."

## GROUP RESEARCH IN GENERAL PRACTICE.

"NOBODY would imagine that the use of chemistry in botany tends to make of botany a science, nor can the chemist claim to belong to the scientific side of botany. Yet laboratory subjects such as chemistry, physiology, and bacteriology are sometimes spoken of as belonging to the 'scientific' side of medicine, the implication being that the clinical side is not 'scientific.' It cannot be too strongly insisted upon that the assistance rendered by these subjects is of an elementary kind, and, though necessary, they cannot provide that knowledge which is required for the solution of medical problems. Medical science demands the carrying of investigation far beyond the reach of the laboratory worker." Sir James Mackenzie, in an article that appeared in this *Journal* on June 28th, 1924 (the last we ever published from his pen), thus differentiated medicine as a subject with aims and methods peculiar to itself, and made a plea for the scientific study of clinical problems. Much earlier than this—in October, 1919, when he founded the Institute for Clinical Research at St. Andrews—the idea of the general practitioner as an individual with his own special field of scientific work, which nobody else could quite share with him, was completely formulated in his mind. Only the general practitioner, he believed, had the opportunity of studying disease before the occurrence of pathological changes in the tissues. Whereas the specialist necessarily saw fully formed disease, the general practitioner encountered minor maladies, and illnesses revealing their presence only in the patient's symptoms. It was in the study of disease at the stage when disturbed function rather than structural change dominates the picture, in the investigation of the relation between disease and environment, in the prolonged observation of symptoms and their bearing on the future health of the patient, that Mackenzie saw the unique opportunities of the general practitioner. It was for research into these problems that the Institute was founded. How plentiful is the material demanding such investigation has been made evident by the steady stream of papers that has come from St. Andrews year by year since 1919. In the past twelve months, for example, the staff of the Institute, in co-operation with the general practitioners in the St. Andrews area, have studied "The law of disturbed reflexes" as applied to the symptoms of disease and to the reactions which occur in the skin; they have investigated the variations in temperature and pulse which are consistent with health, and the modifications which are of value in the detection of early signs of disease; they have made records of the state of the tonsils and its relation to disease. Further studies have concerned the principles of James Mackenzie as applied to ophthalmology (of which one of the fruits was a paper, "The pathogenesis of acute primary glaucoma," published in our issue of May 12th last, p. 789); the diagnosis, mode of onset, prognosis, and treatment of cardiac infection; the cytology of the blood in health and in common ill-defined diseases; and the etiology of the common cold and its relation to influenza.

Further evidence of the vitality of the Institute is afforded in its recently published ninth annual report. The organization for obtaining full and trustworthy health records of children at St. Andrews is now complete. Ante-natal histories are provided by general practitioners and filed at the Institute; notes are kept at the welfare centre of the child's health from birth to the end of the second year of life; examinations of the same children between the ages of 2 and 5 are made at the Institute at regular intervals; and observations are continued during later years. In this way over 80 per cent. of all the children born in St. Andrews are being kept under supervision. Effective correlation of the public health activities of the local authority with the work of general practitioners continues under the administration of the medical officer of health. We note also that an ante-natal clinic was established in the Institute during the year under review. The volume of routine investigations in the laboratories does not diminish, and experimental work is also in progress. As foreshadowed in these columns a year ago, the series of lectures on gastro-intestinal diseases delivered to medical practitioners at the Institute during the winter of 1927 has now been published in book form, and a review appeared on September 22nd, 1928 (p. 531). A bibliography of the medical works and articles on medical subjects written by James Mackenzie has been prepared under the direction of the council of the Institute and issued as a pamphlet.[1] It is especially pleasing to us to be reminded thus of the long succession of papers by Mackenzie which were published in the *British Medical Journal* from the year 1901 onwards, during the editorship of his staunch supporter Dawson Williams.

Most of the Institute's work, it will be noted, has involved the correlation of the efforts of a large number of practitioners. It is in some ways a paradox that James Mackenzie, himself most individual of workers, should have been so passionate an exponent of the idea of group research; that he, of all men, should have founded an Institute which has done so much to vindicate the value of team-work as applied to scientific discovery. We cannot but feel that the recent inquiry conducted by the British Medical Association into the treatment of varicose ulceration, and reported upon by Dr. Arthur P. Luff in our issue of December 22nd at page 1144, would have pleased Mackenzie both in its conception and its execution. It was an investigation that provided an opportunity to the lonely practitioner, lacking even the facilities of a cottage hospital, let alone the stimulus and inspiration of an organized institute, to contribute his share to the general pool of knowledge. The Council of the James Mackenzie Institute has reason for satisfaction in the thought that the incentive to study provided by the researches and initiative of its founder continues to stimulate a new generation to expand and intensify scientific research; and that the institution he planned carries on well its other purpose of enabling general practitioners to make themselves familiar with methods of clinical research applicable in private practice.

[1] *Journal of the American Medical Association*, vol. xci, No. 8.

[1] W. C. Henderson and Son, Ltd., University Press, St. Andrews.

## PARLIAMENT AND MEDICAL MATTERS.

ALMOST the last thing which the House of Commons did before rising for the Christmas recess was to pass the chief medical provisions of the Local Government Bill through committee without a word of debate. The time-table of the bill had, indeed, been so arranged by the Government that these clauses were sure to be closured and put to the vote without discussion, and the Opposition, in their criticism of this time-table, did not select this point for protest. This is typical of the attitude of the House of Commons towards medical questions. While not actively hostile, it feels little interest in purely medical matters, and shows no desire to discuss them. When the Ministry of Health Estimates have come under discussion during the year the Opposition chose to debate them in order to talk about Poor Law administration and the relief of the unemployed and their families. Only late at night were medical members able to interpose speeches about public health, and these were treated as unwarrantable intrusions. The subsequent speakers returned abruptly to non-medical topics, and the final reply from the Government was concerned only with the latter. Somewhat similarly, the parliamentary consideration earlier in the year of the National Health Insurance Bill was concentrated most upon the proposals for preventing the unemployed from lapsing from benefit. Labour members proposed to add extensively to the additional medical benefits which might be paid by approved societies having accrued surpluses. These proposals, in several cases, were admittedly made as a counsel of perfection and in the knowledge that within the financial limits of the national health insurance scheme no society could provide the suggested benefits. On the other hand, certain Labour members denounced the theory that additional benefits should be expended on medical and cognate services, and enunciated the doctrine that the first need and right of an insured person, when a society had a surplus, was to increases of cash benefits. On the Labour benches the belief still lingers that the national health insurance scheme should be in part a sharing-out benefit club for providing occasional financial windfalls to wage-earners. Though medical and health subjects have been little debated in either House during 1928—the only adequate debates, indeed, being in the House of Lords upon the Preservation of Infant Life Bill—no anti-medical bias has been shown. Members simply care little for health questions, and, with a general election approaching, do not see how any votes can be won on them. A few questions about "artificial sunlight" treatment in schools and under public authorities are almost the only medical inquiries which laymen on the back benches have put to the Government. The former flood of questions about the medical treatment and classification of ex-service men has almost ceased now that the Ministry of Pensions has applied the seven years limit to claims. Attention has been directed to the closing of hospitals by the Ministry, and Dr. Fremantle has suggested that special buildings and expert staffs might be taken over by civilian authorities. Fewer questions have been put concerning small-pox and vaccination since the report of the Royal Commission. The year 1928 saw one parliamentary session ended at the beginning of August and another well advanced at the end of December as a result of a new arrangement of the annual business of Parliament. In the first session the chief measure of medical importance was the National Health Insurance Act, which received the Royal Assent on July 2nd and came into force this week. Financial and tactical considerations prevented Mr. Chamberlain from incorporating in it all the proposals of the Royal Commission on National Health Insurance, but its provisions are consistent with the recommendations of that body. During the discussion of the measure in standing committee medical members of Parliament made effective contributions to the debate. The Registration (Births, Deaths, and Marriages) Bill, introduced by a private member with the concurrence of the Ministry of Health, passed the House of Commons but did not secure the Royal Assent. Its substance has now been incorporated in the Local Government Bill. Less direct medical interest attaches to the Shops (Hours of Closing) Act, the Slaughter of Animals (Scotland) Act, and the Rag Flock (Amendment) Act, all of which became law on August 3rd. The Representation of the People Act, passed in July, confers the parliamentary and municipal franchises on women at and above the age of 21 on the same terms as men, but does not otherwise affect the university franchise, although Opposition speakers urged its abolition. The Budget was noteworthy for the imposition of a tax on motor fuel—but not on lamp kerosene—for the purpose of financing the Government scheme for the relief of rates on industrial property. During the session the Government set up a committee to inquire into the causes of maternal mortality, and another to inquire into the training of midwives. In the session 1928–29, the last of the present Parliament, the House of Commons has so far passed more than fifty clauses of the Local Government Bill through committee, and the Lords have amended the Preservation of Infant Life Bill so as to safeguard more fully the doctor or nurse in bona fide attendance at a lying-in. The Government has secured sanction for a special grant to relieve destitution among women and children in the coal-fields. The Parliamentary Medical Committee has met regularly during the year, and has had useful conferences with representatives of the British Medical Association. Its members have made many sound speeches in the House, but when, as on the National Health Insurance Bill and the Local Government Bill, medical questions become party issues, the members of the committee generally keep in step with their parties, and not with one another.

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## THE CAIRO MEDICAL CONGRESS.

AN International Congress of Tropical Medicine and Hygiene was held at Cairo from December 15th to 22nd on the occasion of the centenary of the faculty of medicine and the Kasr-el-Aini Hospital. At the official inauguration of the congress on the morning of December 15th, in the presence of His Majesty King Fuad I, an address of welcome to the delegates was delivered by His Excellency Dr. Mohammed Shahin Pacha, Under Secretary of State for Public Health. Sir George Newman, chief of the British delegation, in his reply, expressed the hope that the congress would help to foster international co-operation in the study of disease, especially in relation to the problems of prevention. Sir Robert Philip, the official delegate of the British Medical Association, presented an address to the faculty of medicine congratulating it in the name of his 34,500 fellow members on having attained its centenary. The address, which was signed by Sir Ewen Maclean, President of the Association, and Dr. H. B. Brackenbury, Chairman of Council, recalled with pleasure the active part which members of the British medical profession had taken in the work and development of the faculty, and expressed the hope that the international congress to be held in connexion with the centenary celebrations would prove fruitful, not only in illustrating the advances that had been made during the last century, but in clearing the path for continued progress. On December 16th King Fuad laid the foundation stone of the new Kasr-el-Aini Hospital and medical school, erected at Roda Island to take the place of the old buildings. The new hospital will accommodate 1,500 in-patients. During the same afternoon Sir Berkeley Moynihan conferred the honorary Fellowship of the Royal College of Surgeons of England on Dr. Ali Bey Ibrahim, university professor of surgery. The various scientific

sections of the congress met daily from December 17th to 21st, two general meetings being held to discuss ankylostomiasis and bilharziasis respectively in all their aspects. Among those who made communications were Sir StClair Thomson, Sir William de Courcy Wheeler, Professor Munro Kerr, Dr. J. B. Christopherson, and Sir Frank Colyer. Sir William Wheeler was present with Sir Robert Philip as official representative of the British Medical Association. At the final meeting of the congress the honorary degree of Master of Surgery was conferred on Sir Berkeley Moynihan, Sir Holburt Waring, and Sir William Wheeler; and that of Doctor of Medicine on Sir Robert Philip, Sir Cooper Perry, and Professor G. H. F. Nuttall. Several important decisions were reached at this meeting. It was resolved to hold the next congress in Holland in 1931; a plea was made for the study of physical anthropology by faculties and schools of medicine in tropical countries; and a resolution was adopted to invite the Governments of all nations represented at the congress to co-operate to combat leprosy by improving the facilities for diagnosis, ambulatory treatment, isolation, and inspection of patients' relatives and contacts.

## ASTHMA RESEARCH.

CONSIDERABLE progress has been made by the Asthma Research Council since we noted on March 17th last (p. 458) the preliminary steps that had then been taken to organize a massed attack upon the problem of asthma. Special research clinics are being established in eight hospitals; they will be financed by the council, but the work will be arranged and supervised by members of the local staffs. These hospitals are: Guy's, where Drs. H. W. Barber, R. D. Gillespie, and A. F. Hurst will be in charge of the clinic; the Royal Infirmary, Liverpool, under Professor John Hay; the Royal Infirmary, Edinburgh, under Dr. Cranston Low; the Stobhill Hospital, Glasgow, under Dr. James Adam; the Birmingham General Hospital, under Professor H. W. Wynn; the Royal Victoria Hospital, Belfast, under Sir Thomas Houston; the Royal Infirmary, Manchester, under Dr. F. E. Tylecote; and the Hospital for Sick Children, Great Ormond Street, under Dr. E. A. Cockayne. The question of providing facilities for such clinics is also being considered by the Brompton Hospital and the Bristol Royal Infirmary. The Leeds General Hospital, while not in a position to do this, has suggested a different scheme of co-operation. The laboratories of the Rockefeller Institute at the Edinburgh Royal Infirmary and of the University of Bristol will be utilized for research work, under the direction of Professor Murray Lyon and Dr. Cranston Low at Edinburgh and of Professor J. A. Nixon at Bristol. Moreover, the laboratories at King's College Hospital and St. Mary's Hospital, London, have arranged to work in conjunction with the medical advisory committee of the Council, while the Edinburgh Asthma Inquiry Committee and the Glasgow Asthma Investigation Committee will also co-operate. The British Humane Association having provided a grant of money for the investigation of special physico-therapy methods in use at Continental spas, Dr. Una Ledingham was enabled to visit Reichenhall, Mont Dore, Ems, Hamburg, Berlin, and Paris, and examine such procedures as saline and pine oil inhalations, automatic breathing apparatus, nasal gas applications, ultra-violet light therapy, and diathermy. The Medical Research Council has made a grant to Dr. G. H. Oriel for the continuation of his research at Guy's Hospital into the biochemical causation and treatment of asthma. From the Halley Stewart trust endowment a grant of £2,500, spread over four years, is forthcoming; part of this money is being devoted to the establishment of a clinic at Great Ormond Street Hospital for the study of asthma in children, under the direction of Dr. Cockayne, and the remainder to the provision of a clinic at Guy's Hospital to supplement and complete Dr. Oriel's research, using the methods of nasal treatment advocated by Dr. Haseltine of Chicago for other patients, who will thus serve as control cases. A form for the collection of asthmatic family histories and statistics has been prepared by the Asthma Research Council for circulation, with a view to tracing hereditary influences affecting the onset of asthma and its relationship with other syndromes. It is hoped that medical practitioners will encourage asthma patients to complete these forms in order that scientific data may become available for study. We publish elsewhere (at page 43) a letter from the secretary of the Asthma Research Council calling attention to a meeting at the Mansion House on January 15th, which it is hoped that many doctors will be able to attend. The Medical Advisory Committee has been enlarged, and now includes: Dr. A. F. Hurst (chairman); Professor R. J. S. McDowall (vice-chairman); Dr. James Adam, Dr. L. S. T. Burrell, Dr. Cockayne, Dr. John Freeman, Dr. Gillespie, Dr. Barber, Professor Hay, Sir Thomas Houston, Dr. W. E. Hume, Dr. Cranston Low, Mr. V. E. Negus, Professor Nixon, Dr. S. Gilbert Scott, Dr. Tylecote, Dr. G. W. Watson, and Professor Wynn.

## SEASONABLE WEATHER.

ARE there any grounds for the popular belief that Christmas weather is milder than it used to be? The idea contains no inherent improbability, for nothing in the English weather is constant except change, nothing predictable except the passage of the seasons—"If winter comes can spring be far behind?" The old-fashioned Christmas, the Christmas of bright sunshine, cold crisp air, and a snow-decked countryside, may be a myth invented by Victorian novelists and fostered by the notoriously unreliable memories of people as they get on in years. The phenomenon of pseudo-memory is, after all, well known to psychologists. Through the haze that envelops our earliest years a single snowy Christmas may proliferate an uninterrupted series in the memory; Christmas cards are forgotten, but the images painted on them may be projected on to the outer world. The impulse to idealize the past, moreover, is one from which very few of us are exempt. The mind, regressing from the problems of the present, finds some compensation in a fantasy of past perfection. Perhaps it is this tendency that underlies the question, "Mais où sont les neiges d'antan?" Dr. C. E. P. Brooks, in an article published in *Nature* on December 22nd, suggests much the same idea. "A few frolics in the snow when we were young," he writes, "would colour all our memories of winter. The change may not be in the weather, but in ourselves." Virginia Woolf, on the other hand, seems to subscribe to the theory of a changed climate, of a climate that has lost its rigors, but at the same time shed much of its attractiveness. In that puzzling book *Orlando* she informs us gravely that the frost in Elizabethan times was so severe "that a kind of petrifaction sometimes ensued; and it was commonly supposed that the great increase of rocks in some parts of Derbyshire was due to no eruption, for there was none, but to the solidification of unfortunate wayfarers who had been turned literally to stone where they stood. . . . Frozen roses fell in showers when the Queen and her ladies walked abroad." In the eighteenth century there was snow, and the air was dry; but in the nineteenth century Orlando became aware that a change had come over the climate of England. "Rain fell frequently, but only in fitful gusts, which were no sooner over than they began again. The sun shone, of course, but it was so girt about with clouds, and the air was so saturated

with water, that its beams were discoloured. . . . A change of diet became essential. The muffin was invented and the crumpet. Coffee supplanted the after-dinner port, and as coffee led to a drawing-room in which to drink it, the home . . . was completely altered." Thus, Virginia Woolf tells us—and she does not flicker an eyelid—"stealthily and imperceptibly, none marking the exact day or hour of the change, the constitution of England was altered and nobody knew it." The writings of Henry Thomas Buckle have indeed accustomed us to the idea that at any historical epoch the prevailing meteorological conditions may serve in large measure to explain the character and the social, political, and economic life of a people. Such a climatic conception of history finds ready acceptance among the English people, who from day to day observe the profound influence of climatic and weather conditions upon their psychological make-up and their physical activities. The adventurous spirit of our race may thus have been no spontaneous emergence of national character; it may have been bred of an urgent desire to escape from the English climate. According to this line of thought the British Empire was built up by a people made hardy and adaptable by our climate, but none the less goaded to travel by a deep yearning for settled weather. One is reminded of the charming Persian Ambassador cited by Morier, who, asked by his hostess at an English party if it was true that in his country people worshipped the sun, replied, "Yes, madam; and so would you in this country also, if you ever saw the sun." Here, indeed, was a belief founded on a sketchy impression. Is the popular notion that weather conditions have changed established on any securer basis? Dr. Brooks thinks it is. "During the past century," he writes, "winters have become steadily warmer, and the average of the past ten years, 41.1° F., is the highest since records began. . . . There appears to have been a real change of climate about 1750. . . . This was the time of the great 'frost fairs' on the Thames, notably 1683–84, 1715–16, and 1739–40. . . . If the old-fashioned Christmas ever had a real existence no series of years is more likely to have given birth to the tradition." Surely Dr. Brooks has forgotten the Christmas of 1927.

## OSLER AS EPIDEMIOLOGIST.

IN amplification of remarks made at the meeting of the Osler Club last July, to which we alluded on July 21st, 1928 (p. 117), Dr. J. D. Rolleston, in a recent article,[1] emphasizes the keen interest taken by Sir William Osler in the study of epidemic diseases, an interest doubtless inspired to some extent by the fascinating history connected with many of them. Osler's familiarity with the work of the early epidemiologists is illustrated in his textbook and his miscellaneous writings, particularly the essay on "Some aspects of American bibliography." Although small-pox, cerebro-spinal fever, and venereal disease formed the subject of some of his more important addresses, typhoid fever and tuberculosis were the infectious diseases to which he devoted most of his attention. The importance he attributed to typhoid fever—which, owing to the heavy toll it exacted of young persons, he called the "Minotaur of infectious diseases"—is shown not only by its occupying the first place in his textbook, but also by his dictum that a student could learn most of medicine and a good deal of surgery—the latter much at the patient's expense—by a study of this disease alone. The insanitary conditions responsible for the outbreaks of typhoid fever—which was rife in America, particularly at Baltimore, when Osler was professor of medicine at Harvard, frequently provoked a protest from him. The incidence of typhoid fever, he maintained, was the sanitary index of the community, and in the matter of purification of their large towns he accused the United States as being a generation behind Europe. Many years later, shortly after the outbreak of the war, he urged the necessity of antityphoid inoculation, and denounced the "sons of Belial" who had been trying to oppose the measure. In like manner his conviction of the value of vaccination against small-pox is illustrated in a characteristic passage in the essay entitled "Man's redemption of man," in which he issues a "Mount Carmel-like challenge to any ten unvaccinated priests of Baal." Osler's interest in tuberculosis assumed a very practical form. In 1902 he was responsible for the establishment of the first tuberculosis dispensary at Baltimore. He also took an active part in the campaign against tuberculosis in Philadelphia, and later in England, where he helped to form the National Association for Prevention of Consumption in 1903, and started an Oxford branch in 1910; it was only his fatal illness which prevented him from delivering an address before the association in 1919. Osler's interest in epidemic disease was maintained until the end. In June, 1918, he paid a special visit to the London Hospital to see the first cases of lethargic encephalitis, and a few months before his death he approached the Foreign Office for concerted medical action to deal with the deplorable sanitary conditions in Vienna, which were a menace to public health, not only in Germany and Austria, but also in the rest of Europe. In conclusion, Dr. Rolleston gives a short account of Osler's views on the alcohol problem.

[1] *Clinical Journal*, November 28th, 1928, p. 573.

## THE FIELD OF BACTERIOLOGY.

THE world of microscopic creatures is being explored from many different points of departure by investigators with widely different scientific interests. The medical bacteriologist has, as his primary motive, the study of bacteria in relation to human disease, and he is comparatively uninterested in non-pathogenic germs. Urged by the pressing claims of health and disease, research work on the small group of pathogenic bacteria has made more progress than work undertaken for scientific interest alone, and to-day we find that the disease-producing microbes are more accurately described and their habits much better known than is the case with the harmless germs of water and the soil. The success which has attended the search for the cause of infectious disease, and the new means of prevention disclosed by these scientific triumphs, though they have proved of incalculable benefit to mankind, should not be allowed to eclipse the advantages to human welfare gained by progress in other branches of bacteriology. The preservation of food, the making of butter and cheese, the canning of meat, and the bottling of fruit—all these are carried out with more efficiency and security to-day because the work of microscopic allies and enemies is better understood in the industries concerned. Mankind has reaped advantages from progress made in the exploration of the microscopic world from whatever direction it has been undertaken, whether the starting point has been the bacteriology of water, of the soil, of milk, of vinegar, or alcoholic beverages. The time has now come when the medical bacteriologist cannot maintain a just perspective unless he knows something of the knowledge gained by non-medical investigations of bacteriological problems. Hitherto the attainment of this knowledge has not been an easy matter, for he cannot be expected to study textbooks written for farmers, dairy workers, bakers, and brewers, and there have not been many books which have attempted to interpret the science of bacteriology from a non-professional point of view. A book has recently been published, entitled *The Newer Knowledge of Bacteriology and Immunology*,[1] which serves a useful purpose in

[1] *The Newer Knowledge of Bacteriology and Immunology.* Edited by Edwin O. Jordan and I. S. Falk. Chicago: University of Chicago Press; London: Cambridge University Press. 1928. (Roy. 8vo, pp. x + 1,196; illustrated. 50s. net.)

correlating bacteriological problems. It has the outward appearances of a massive dictionary, its 1,196 pages being stoutly bound together in one volume. Eighty-two contributors have written on the particular branches of bacteriology of which they have special knowledge, and the book is edited by Drs. Jordan and Falk of the University of Chicago.

### COCKTAILS AND THEIR EFFECTS.

THE practice of cocktail drinking appears to be almost as prevalent in medical circles as in other society gatherings, and might therefore be supposed to have been condoned rather than condemned by the profession. We have, indeed, heard the custom defended by one grave authority on the plea that it was a stimulant to the endocrine system. In the current issue of the *British Journal of Inebriety* Professor W. E. Dixon of Cambridge describes the composition and effects of this American importation, which has largely taken the place of sherry and bitters or gin and bitters as an *apéritif* before meals. The cocktail usually consists of a solution of volatile oil, more rarely bitters, with vermouth and spirits, such as gin, whisky, or brandy. The most important constituent in each case is alcohol, the oils serving mainly as a mild irritant to the stomach. The spirit is very rapidly absorbed from the empty stomach, and the rate of absorption is still further facilitated by the irritant action of the oils. Having reached the blood it is absorbed into the tissues, and especially the central nervous system, where it produces a stimulation of the nerve cells which continues until the tension of alcohol in the nerve cells and blood becomes equal, after which the alcohol exerts its ordinary action on the central nervous system. The action of the cocktail, unlike that of ordinary alcoholic beverages, is immediate, but its duration is transient, being limited to fifteen or twenty minutes at the most. This form of drinking, Professor Dixon maintains, is particularly pernicious for young people of either sex, who form a large percentage of cocktail drinkers, partly to lose their shyness and partly in a spirit of bravado. Not only does it impair their stomach, but it helps to promote the habit of excessive drinking more than any other type of beverage.

THE late Mr. J. H. Plummer of Southport has made a munificent bequest to the University of Cambridge for the endowment of two chairs for the promotion of modern scientific research. Almost the whole of his estate, valued at more than £250,000, is bequeathed to the University in the form of a trust to be known as the John Humphrey Plummer Foundation.

## THE KING'S ILLNESS.

THE communiqué printed below has been authorized for publication in the *Lancet* and the *British Medical Journal*. It supplements the reports published on December 15th and 22nd, and is dated Wednesday evening, January 2nd. We believe that our readers generally will approve this policy of telling the public as much as possible, through the most appropriate channel, about the illness of their King.

"For true understanding of the position it must be emphasized that neither in its inception nor in its subsequent course has this illness conformed to what is called 'pleuro-pneumonia'; rather was it a streptococcal septicaemia which by fortunate happening localized at the base of the right lung, first imperfectly and later as an empyema ('fixation abscess') forming between the base of the lung and the diaphragm. In the second phase of the illness (vide report December 22nd) the clinical picture—dusky appearance, dry cracked tongue, delirium, subsultus, exhaustion—was that of a severe toxaemia, and resembled that of a case of severe typhoid fever in the third or fourth week. So now the picture is that of the aftermath of a severe general infection. The empyema wound is now clean and steadily diminishing in size, the discharge from the pleural cavity is small in amount, and the streptococcus grown from the pus (identical with that originally found in the blood) is diminishing in potency. Eusol has been an effective local application, and though—through the courtesy of an American colleague, Dr. Sherman of Pittsburg—a supply of Dakin's solution, electrolytically prepared, has been recently received, there has been no opportunity to use it because the necessity for any such local application has passed.

"On the other hand, the disinclination for food and the dryness of the tongue, the low blood pressure, the weakness and wasting, the notable exhaustion, though slowly improving, will for long be an anxious problem. It will be readily understood that while this exhaustion state is pronounced, the margin of reserve power must be narrow, and that small set-backs, inevitable at this stage, have a correspondingly more severe effect. It is important that the public should not interpret such set-backs or reports of 'no change' as relapses. During each week there will be ups and downs, and progress will consist of a slow and increasing predominance of the ups over the downs. One of the inevitable difficulties in so long an illness is to convey to the public a true picture—neither too bright nor too dark. It is for this reason amongst others that the courtesy of the medical press is valuable, in order to convey through their readers to the public fuller information, and so avoid the risk of misunderstanding.

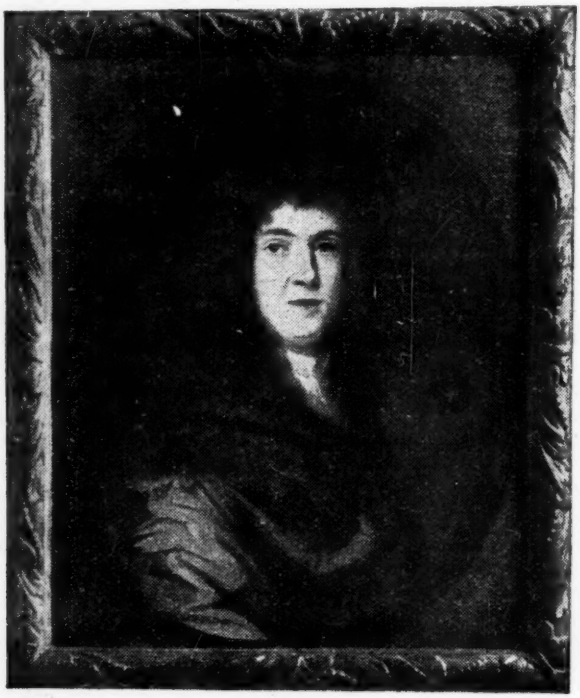
"As regards nourishment, about which so many suggestions have been received, the difficulties will be understood when it is stated that there is disinclination for most foods and dislike for many, and that weakness necessitates that nourishment be given by a nurse with a feeder. Adequacy of nutriment, both as regards quantity and variety, is now being secured, though not without difficulty. Moreover, the combating of loss of weight, which has been notable, depends not only on food taken but food digested and assimilated, and here again the exhaustion tells its tale. The blood pressure has fallen too low and the calcium content of the blood has of late considerably decreased. The administration of calcium, parathyroid extract, and strychnine is apparently beneficial. The same is true of ray therapy, which is being continued. It need hardly be stated that the question of blood transfusion has received full consideration. In an illness of this complicated character the indications for transfusion must be clear, and it must be remembered that with the most skilled procedure its employment would in this case entail risk. The striking results following transfusion—for example, in cases of anaemia due to either haemorrhage or infection—are apt to lead to its employment in other conditions without adequate consideration of the pros and cons. It is sufficient to repeat that in this grave illness it has been fully considered, and put aside at the present stage as definitely undesirable. Moreover, the red blood cell count is one of the most hopeful features, for whereas in the early days of the illness the red count was as low as 2,900,000, to-day it reaches 4,300,000.

"The exhaustion is as much a weariness of mind as of body. Though there is an increasing sense of the burden of his illness, the will of the King to live is there. Because of this exhaustion the course must be long and for the present anxious. None the less, improvement and progress are taking place slowly but surely enough to justify the hope that the King will be restored to his people."

# Nova et Vetera.

## JOHN MAPLETOFT, 1631–1720.

JOHN MAPLETOFT, to whom Sydenham dedicated the third edition of his *Medical Observations*, was the son of the Rev. Joshua Mapletoft, vicar of Margaretting in Essex, and the godson and great-nephew of Nicholas Ferrar, jun., of Little Gidding. He was born at Margaretting in 1631, and in 1635, when he was 4 years old, his father died. Thereupon his godfather, Nicholas Ferrar, took charge of him and brought him up in the devout family community which he (Ferrar) had founded there. John Mapletoft was educated at Westminster under Dr. Busby; here he met John Locke, and formed a friendship with him that lasted all through their lives. He was originally intended for Holy orders, but the troublous times of the Civil War postponed the fulfilment of his desire. In 1648 he went from Westminster to Trinity College, Cambridge, took



John Mapletoft.

his B.A. degree in 1651, became a Fellow of his college in 1653, and in 1654 was incorporated B.A. at Oxford. He was expelled from his Fellowship by the Parliamentary Visitors, and, with many other graduates of Cambridge who were forced to leave Cambridge for their loyalty, retired to Oxford. Possibly he took this step for the reason given by Anthony Wood, "to avoid the cruelties and barbarities of the presbyterians." But Wood mentions another reason in his *Fasti Oxonienses* (under the year 1655), where he says that many of the graduates by incorporation came to Oxford "for the sake of the public library." In the case of Mapletoft the cause is not clear, because in 1655 he proceeded to the M.A. degree at Cambridge.

For three years (1658–1660) he travelled as tutor to Joscelyn, son of Algernon, last Earl of Northumberland. After 1660 he studied medicine in Italy, and, having been restored to his Fellowship, took his M.D. degree at Cambridge. Then he practised in London, where he made the acquaintance of many eminent physicians—Willis, Cox, and Sydenham—continuing there his close friendship with Locke. An interesting event occurred at Oxford in 1669.

"This year," to quote Anthony Wood again, "Sheldon's Theatre being opened, and dedicated for a learned use was a most splendid Act celebrated therein on the 12th of July and very many Cambridge men coming to the solemnity . . . were incorporated in a Congregation held in the House of Convocation the next day."

Among the Cambridge men thus honoured was John Mapletoft, described by Wood as "afterwards Professor of Physic in Gresham College and Fellow of the Royal Society." His first lecture as Gresham Professor was delivered in 1675. Unlike his friend Sydenham, who makes no mention of the work of Harvey, Mapletoft devotes considerable attention to this work.

"I will begin," he says, "with that celebrated and useful discovery which was first made and published to the learned world by that ornament of his own age and of this nation to all ages, the judicious Dr. Harvey concerning the motion of the heart, and circulation of the blood."

His admiration for Harvey did not end with mere words of eulogy; Mapletoft presented to the Royal Society that well-known portrait of Harvey in a skull cap which hangs in the rooms of the Royal Society at Burlington House.

When he resigned the Gresham Professorship in October, 1679, Mapletoft retired from the practice of medicine, an occasion which caused John Locke to write regretfully to him: "I like our calling the worse since you have quitted

Rebecca Mapletoft (*née* Knightley).

it." In November, 1679, at the age of 48, he married Rebecca, daughter of Lucas Knightley of Hackney, a Hamburg merchant, and lived in the country to prepare himself quietly for Holy orders. He was ordained deacon and priest in 1682, and became rector of Braybrooke in Northamptonshire soon after. In 1684 he was appointed vicar of St. Lawrence Jewry. In 1689 this remarkable man, who had seen Charles I visit Little Gidding in 1642, and again in his flight for safety in 1646, had the degree of D.D. conferred upon him when King William went to Cambridge. His ministry was no mere leisured evening to his life, for he was one of the active promoters and founders of the Society for the Propagation of the Gospel in Foreign Parts, a member of the Society for the Promotion of Christian Knowledge, president of Sion College, and a director of Greenwich Hospital. In 1710, after a serious illness, John Mapletoft resigned his living, and spent his last years in the house of his daughter and her husband, Dr. Gastrell, Bishop of Chester. There he enjoyed a soft and gentle old age, preserving to the last a gaiety and cheerfulness of temper, seeming always desirous to gain the affections of those about him that he might engage them to virtue and religion. He clung affectionately to the recollections of his early life in the family community of the Ferrars, giving to his son a Gidding Concordance, in which he wrote: "I desire that it may be preserved in his family as long as

may be." His long life covered an era in English history full of strife and change, yet such was the largeness of his heart that he could number among his friends Sydenham, who was one of Cromwell's captains, and Locke, whose father had been a captain in the Parliamentarian forces. He died in 1721, and was buried under the altar in St. Lawrence Jewry.

The portraits of John Mapletoft and his wife which illustrate this article are by John Riley, a well-known Court painter, whose fame has been depressed by his best works having been ascribed to Lely. Charles II, James II and his queen, and William and Mary all sat to him. We have been enabled to publish photographs of these portraits by the kindness of one of his descendants, Mr. A. J. Leonard of Bristol.

The portraits are at present in possession of Mr. J. Burford Leonard of 7, Hughenden Avenue, Belfast, who has had them photographed, and has generously sent prints for reproduction in the *Journal*. One of John Mapletoft's daughters married the Rev. Edward Burford, in whose family the portraits have been handed down as heirlooms, and have thus become the highly prized inheritance of Mr. Burford Leonard.

J. A. NIXON.

## SOCIETY OF APOTHECARIES OF LONDON.

### APPEAL FOR HALL RESTORATION FUND.

AN appeal has been issued by the Court of Assistants of the Society of Apothecaries of London to its licentiates in all parts of the world for contributions towards the restoration of its ancient hall in Water Lane, Blackfriars. It was found some months ago that the fabric was in danger of collapse owing to damage caused by the death-watch beetle in the main timbers, and it has therefore been necessary to make immediate provision for reparation and preservation. The work necessary has been extensive, and the cost, which it is estimated will exceed £20,000, has caused grave concern to the Court, which accordingly decided to ask those most intimately associated with the Society to assist. Great care has been taken to preserve the ancient character of the building and to retain the features which give the Hall its peculiar historic interest.

The building, it may be recalled, was erected in 1671 on the site occupied by the former home of the company, which had been burnt down five years earlier in the Great Fire of London. Its situation in the City itself, and the nomenclature employed in its administration—governed as it is by a master and wardens, with a court of assistants—remind us that the Apothecaries' Society of London is one of the old City Guilds, with an independent charter granted in 1617 by James I. The appeal for support in the restoration of the Hall is, therefore, made on two grounds—the desirability of preserving a monument of historic interest, and the duty of maintaining unchanged that which is associated with so much of significance in the history of the profession of medicine. On both grounds the request for financial aid seems to merit the support of the profession at large, while among those for whom the Hall of the Society of Apothecaries was the portal through which they entered our profession the appeal should be difficult to resist.

The following list shows donations to the restoration fund received up to December 19th, the total being £639.

*First List of Donations.*

*£100.*—H. H. Clarke.
*£52 10s.*—Sir William Wells and Alfred Hepburn.
*£26 5s.*—Colonel E. C. Freeman.
*£25.*—W. Adams Frost.
*£21.*—J. Bright Banister and Mrs. Courtauld.
*£15 15s.*—R. Erskine Gray, P. Traer Harris, Herbert R. Mosse, and T. D. Paradise.
*£10 10s.*—Thomas Wakefield, Cecil Wall, Algernon Brenchley, F. de Havilland Hall, Sir George Makins, Victor S. Partridge, and Sir Hugh Beevor.
*£5 5s.*—Horace Sworder, Sir George S. Buchanan, J. O. W. Barratt, H. J. Hott, R. W. Statham, Samuel Osborn, Lieut.-Colonel C. T. Samman, R. Austin Freeman, A. H. N. Lewers, John H. Chambers, Edmund Johnstone, Miss Mary Rathbone, R. H. Hayes, Sir Ronald Ross, and A. P. Gibbons.
*£3 3s.*—Peyton Beale, E. Treacher Collins, Frank P. Haviland, and William Handcock.
*£2 2s.*—James Brierley, D. Cotes-Preedy, L. V. Cargill, J. W. Carr, J. Fletcher Horne, Miss Katherine Heanley, Andrew Boutflower, Edmund Couchin, D. Colquhoun, A. P. Luff, Evan H. Hare, J. Müller, Louis Savatard, and Norman W. Rawlings.
*£1 10s.*—T. B. F. Eminson.
*£1 1s.*—Miss V. E. M. Bennett, T. M. Beattie, M. G. Biggs, Hobart J. W. Barlee, G. H. Bate, C. Bradford, A. C. Barrow, R. H. Birtwell, John Bate, Bertram Bond, S. H. Appleford, W. B. S. Relton, V. Ray Smith, H. Skelding, James B. Couche, R. H. Chadwick, George Aldridge, F. W. Cock, E. Vipont Browne, W. H. Brazil, H. J. Clutterbuck, Valentine Blake, Thomas S. Byass, Herbert L. Dowsing, James Ewing, J. Cooper, Alfred Duckworth, J. Coxhead Cook, Herbert A. Browning, W. E. K. Kirby, Eric Evans, J. Scott Challice, E. F. Hoare, Richard Hickman, F. H. Beattie, A. J. Dowck, Austin Fenniss, A. G. Everard, T. M. Angior, J. P. Llewellyn, E. Spencer Evans, W. Dunstan, W. H. Harsant, A. L. Joscelyne, E. E. Bowden, E. S. Killick, Miss Kathleen Dawson, Michael Bulman, James Harrison, Miss Laura G. Rees, G. Aubrey Jelly, G. E. J. Crallan, J. C. M. Given, G. Sydney Green, J. E. Elam, Francis Lowe, N. Pines, W. Erle Farnham, Arthur Lowndes, J. W. Papillon, Hugh S. Jeffries, H. F. M. Pope, E. L. Payne, S. R. T. Griffith, A. D. Owen, John W. Meek, J. Wallis B. Mason, H. Gilbert Nicholson, John Kendall, J. H. Lightbody, Miss Ada M. Browne, G. Foster Smith, S. B. S. Smith, M. Melglave, W. G. Sargent, James Miller, L. Maybury, and Edwin G. Firth.
*10s. 6d.*—T. W. Graves.

## ROYAL MEDICAL BENEVOLENT FUND.

DURING the year 1928 the Fund has voted no fewer than 457 grants, amounting to £8,621.

The fact that the work of the Fund has greatly increased, and that the appeals for help are more numerous than ever, will be realized by comparing the above figure with that of the preceding year. The sum voted is £1,456 over that for 1927. Annuities amounting to £4,970 have been given to 185 persons. The average amount of the annuities is £40 per annum, but owing to a recent legacy the Fund has been able to grant six annuities of £100 each.

An increase of £1,456 on the grant account is very heavy, and for the Fund to extend its work as well as continue to help those already on its books necessitates an urgent appeal that subscriptions and donations in 1929 shall be not only maintained, but greatly increased. Cheques should be sent to the Honorary Treasurer, 11, Chandos Street, Cavendish Square, London, W.1.

At the last meeting of the committee £763 was voted to thirty-five applicants. The following short account of a few typical cases may serve to show how deserving are the persons helped by the Fund.

Widow, aged 54, of M.B. Owing to the lack of any special training is unable to earn more than £1 a week. Voted £36 in four instalments. Widow lives rent free in one room.

Daughter, aged 68, of L.R.C.S. and L.S.A. Has supported herself for twenty-one years. Earning at first £16 a year, afterwards £36, rising to £50 and then £80. Her employer has recently died, and, owing to her age (68), she cannot now find work and is practically destitute. Only income old age pension, £26 a year. Voted £36 in four instalments. Other charities will be asked to assist. Applicant at present living with her nephew.

Daughter, aged 66, of M.D. On death of her parents was left eldest of four children and very badly provided for. Has supported herself by teaching until her health gradually gave way at 66. Her only income is £61 a year. Voted £36 in four instalments.

Widow, aged 71, of M.D. Has supported herself by keeping a private school, but owing to her age (71) and to her out-of-date methods of teaching she has practically lost all her pupils, and is almost destitute. Income £65. Voted £36 in four instalments. Other charities are now interested in this case and will help.

The Royal Medical Benevolent Fund Guild still receives many applications for clothing, especially for coats and skirts for ladies and girls holding secretarial posts, and suits for working boys. The Guild appeals for second-hand clothes and household articles. The gifts should be sent to the Secretary of the Guild, 58, Great Marlborough Street, W.1.

# Union of South Africa.

[FROM OUR CORRESPONDENT IN CAPETOWN.]

### Prevention of Tuberculosis.

AT a meeting of the Association for the Prevention of Tuberculosis held at Capetown on November 15th, 1928, a report on the work of the executive since the reconstitution of the association in March, 1928, was received. The president, Dr. D. P. Marais, said that its activities were not so well known in Capetown as might be expected, this being due to the fact that the association was concerned more directly with work in the up-country districts. Propaganda work was being done through posters and literature, and arrangements were made for speakers to give addresses in connexion with health weeks, of which only recently there had been a very successful one at Paarl and another at Beaufort West. A native poster, published by the South African Health Society at Lovedale, together with suitable literature in the native language, had been distributed in the native territories. About one thousand of these were sent out to ninety-three missionaries and ministers, and several of those to whom they were sent out had promised to assist the association's work in the territories. The

Metropolitan Poster Advertising Company of Capetown had been kind enough to undertake to display the association's posters free of charge, when opportunity offered between contracts, on the hoardings of Capetown and suburbs. The police authorities, he continued, had been requested to enforce more strictly the regulations relating to spitting in public places, and a satisfactory acknowledgement had been received. New brass insets for the pavements had been supplied to the municipality. A bioscope film, entitled "Delay is Dangerous," was imported from America at a cost of about £16. The film was passed by the Board of Censors, and was recently sent to Beaufort West, to be shown in connexion with the health week there. The African Films Trust had been kind enough to promise to grant every assistance in the public exhibition of the film when it was returned. Negotiations were now proceeding with the South African Red Cross Society at Johannesburg for the purchase of other films. These negotiations were the outcome of correspondence with the National Tuberculosis Association of England and the Red Cross Societies at Paris, which took considerable time owing to the distance. It was hoped that it would be possible to have incorporated with the imported film a film of local interest, showing some of the local clinics, and life and work at the Nelspoort Sanatorium. It was also intended to have lantern slides of the latest poster made if the cost was found to be reasonable.

### Edinburgh University Medical Graduates' Club.

The second annual dinner of the Edinburgh Medical Graduates' Club was held on December 7th, 1928, at the Western Province Sports Club, Kelvin Grove, Capetown, under the chairmanship of Dr. C. H. Kruger. Among those present were Mr. C. E. Jones-Phillipson, Professor W. A. Jolly, Professor W. Campbell, Drs. D. P. Marais, J. S. du Toit, J. Smith, A. J. Ballantine, F. Krone, F. H. Dommisse, A. W. S. Sichel, S. J. Rom, D. H. Wessels, D. Dowie Dunn, Mr. W. Lennox Gordon, and Dr. Louis Bosman. Besides the toast of "The King" there was only one other, "Alma Mater," which was proposed by Mr. Lennox Gordon, and Professor Campbell replied. An amusing feature of the dinner was the naming of each place at table after some old Edinburgh student haunt, the member sitting there being invited during the evening to recount his reminiscences of the particular place he happened to represent. Before dispersing, a ballot was held to ascertain which of these old haunts was the most popular, and a small memento was presented to the member who occupied the corresponding seat at table. Though the gathering comprised a very small proportion of the old Edinburgh graduates resident in Capetown and the surrounding districts, who number about 110, the evening proved entirely successful. It was originally the intention of the committee responsible for the dinner to entertain as guest of honour Sir Arthur Conan Doyle, a medical alumnus of the University of Edinburgh, at present on a visit to South Africa, but to the regret of all he found it impossible to be present. The club, which was formed only a year ago with the object of fostering a spirit of comradeship among Edinburgh graduates, and is purely a social one, has the following officials: president, Mr. E. Barnard Fuller, F.R.C.S.Ed.; vice-presidents, Professor W. A. Jolly and Dr. C. H. Kruger; honorary secretary and treasurer, Dr. F. Krone.

### New Nursing Home.

The foundation stone was laid on November 3rd of the Volkshospital, the ceremony being performed by the Rev. G. J. Hugo, Moderator of the Dutch Reformed Church Synod. The chairman of the hospital committee, the Rev. F. X. Roome, referred to the valuable work that had been done at the Deaconess and the Monte Rosa hospitals, which were instituted, and were still being run, by the Dutch Reformed Church. The financial position, he stated, was sufficiently favourable for them to proceed with the work. They had £35,000 in hand, together with £3,500 bequeathed by the late Mr. Conradie of Worcester, and they required another £17,000 to provide for a building with 35 beds. Should they decide to add another 15 extra beds an additional £11,000 would be needed. On the spacious grounds (which had been bought for £6,000) nurses' quarters could be built for £10,000, by which the number of beds would be increased to 75. Their immediate aim, however, was not to have a separate building for the nurses, nor would the extra story be built, unless the necessary public support was forthcoming. The Volkshospital was really a hospital nursing home, continued Mr. Roome, being designed on the plan of a general hospital—with full equipment, including an *x*-ray room, and plenty of space for further development—which could be utilized by medical men, specialists, and others. The nurses would be bilingual, because the doors of the "home" would be open to all sections of the European population, and it would add to the comfort of a patient to be attended to in the language he or she knew best. Dean Lavis also addressed the gathering, and paid a glowing tribute to the great work carried out by the Dutch Reformed Church in the hospital institutions under its aegis, where there had never been any suggestion of religious discrimination. That the need existed for more hospitals, he remarked, there could be no question; it was a by-word and a scandal. Among those present at the ceremony were the Rev. J. P. van Heerden, Senator F. S. Malan, Rev. S. P. Fouche, Sir Carruthers Beattie (Principal of the University of Capetown), Dr. D. P. Marais, Dr. J. S. du Toit, Mr. P. M. Daneel, Dr. D. H. Wessels, and Mr. J. Luckhoff.

### Snake Venom "Cure" for Epilepsy.

Publicity has been given lately in the lay press to a grievance ventilated by Mr. F. W. FitzSimons, director of the Port Elizabeth Museum, with regard to his claim to have produced a cure for epilepsy in the shape of snake venom. In a letter which appeared in the *Cape Argus* on November 27th, 1928, Mr. FitzSimons states:

"My attention has just been called to a paragraph in your journal to the effect that Sir Spencer Lister has stated that there was no foundation for my statement that laymen are debarred from publishing scientific articles in the medical journals. Early in 1921 an article of mine, entitled 'Snake venom for epilepsy,' was refused publication by the then *South African Medical Record* on the ground that the journal did not publish contributions by laymen. It was only owing to the special request of the Secretary for Health for the Union that this article was eventually published. Just recently I applied for formal permission to read a paper on 'Snake venoms and their therapeutic value' before the Medical Association at the forthcoming conference at Port Elizabeth, and I had already worked for a considerable time on the preparation of the paper. The official reply to my written application was to the effect that 'according to the regulations, papers may be read before congress only by members of the Medical Association of South Africa.'"

Meanwhile the editor of the *Journal* of the Medical Association of South Africa had written to the *Eastern Province Herald*, a daily paper published in Port Elizabeth, to the following effect:

"As editor of the *Medical Journal*, and as secretary of the Medical Association of South Africa (British Medical Association), I emphatically contradict Mr. FitzSimons's assertion that there is any rule that prevents a layman from publishing an article in the medical press or reading a paper before a meeting of my Association. There is no such rule. My journal has often printed articles written by laymen, and laymen have read papers before my Association. I have refused Mr. FitzSimons's article on the treatment of epilepsy by snake venom just as I should refuse to publish one on the treatment of epilepsy by hydracetum or klipsweet. Both substances have had a fair and extended trial by the medical profession, and there can be no question whatever that they are no more 'cures' for epilepsy than common salt is a cure. For the same reason, possibly, the local branch of the Medical Association of South Africa has declined a paper on the subject. So far Mr. FitzSimons has quoted nothing that is new or that has not been told years ago."

## India.

### Health Propaganda in Madras.

INCREASING attention is being given in various parts of India to the development of propaganda work in connexion with the public health services as a means of educating the masses and disseminating knowledge of hygiene and of factors relating to the causation and prevention of disease. In the Presidency of Madras a separate section of the Public Health Department was constituted about eighteen months ago to deal with this work, and the report of the Director of Public Health for 1927 contains an interesting account of the propaganda activities of the district health staff and other agencies. An auxiliary committee has been

formed to preserve contact between the department and non-official bodies. In the course of the year over 91,800 lectures were given in 41,089 centres to audiences aggregating over 5,800,000 persons, and including about one-eighth of the population of the Presidency. Most of the lectures were given to labourers in rural areas by health inspectors and municipal sanitary inspectors, and were therefore of the simplest kind. It has been found that lectures accompanied by lantern or cinematograph displays are, as might be expected, the most popular and effective, and an endeavour is being made to equip every health inspector with a lantern. The Madras Health Council is lending valuable assistance in maintaining a supply of slides appropriate to the localities in which they are to be shown, but it has proved difficult to secure suitable films, and it is probable that the health department will in time find itself obliged to add film production to its activities. Large quantities of propaganda literature have been prepared and circulated, while the enactment of health dramas—of which a considerable number are in existence—by schoolboys has been found a valuable method of educating the public. Advantage is taken of large gatherings at fairs, festivals, and markets to further the work by the organization of exhibitions, lectures, lantern demonstrations, and the distribution of literature, while health instruction in the schools is being developed as rapidly as circumstances permit. The report of the Health Department expresses the view that the efforts so far made have been reasonably successful, but calls attention to the continued neglect of health propaganda in most of the municipal towns. It is added that in no town without a health officer is sufficient attention paid to this subject, and that this fact alone warrants the suggestion that the Government should insist on the appointment of a health officer in every municipality in Madras.

### Extension of Medical Services in the Punjab.

Considerable progress has been made in recent years in the provision of facilities for medical attention in the Punjab. In 1927 the number of hospitals and dispensaries of all kinds in the province increased from 780 to 885, this being accounted for mainly by the creation of new rural dispensaries. Towards the end of 1925 the Punjab Government sanctioned the adoption of a scheme providing for the establishment of 375 new dispensaries in this category; of these 110 were opened in 1926 and 84 last year, leaving 181 to be established subsequently. In 1927 progress was somewhat slower than before, owing to the fact that certain district boards found the Government grants for construction, equipment, and maintenance insufficient to cover the expenditure involved. In other directions progress was less marked, and only two hospitals were taken over by the provincial Government from inferior authorities. Preparations were, however, made to accelerate the provincialization of a large number of hospitals. As in other parts of India, there is a pressing need for more women doctors in the Punjab; efforts are being made to afford improved facilities for the medical education of women, to extend female hospital accommodation, and to employ an increased number of women in hospitals and other branches of the medical service. Several new institutions for women have been established, or are contemplated. The figures given in the annual statement for 1927 of dispensaries and charitable institutions in the province illustrate at once the need for increased facilities for treatment and the extent to which advantage has been taken of the new services. There was an increase of 870,460 on the previous year's figure in the number of patients treated, the total for 1927 being 9,246,281. Of this number 1,418,188 were treated at rural dispensaries, as compared with 641,258 in 1926, an increase of 776,930.

### Development of Child Welfare Work.

The annual public health report of the Central Provinces and Berar for 1927 calls attention to the development of maternity and child welfare work in that area, where special efforts have been made to secure a reduction in infantile mortality, which is higher than in any other province in India. It is the policy of the provincial Government, as funds permit and local assistance is forthcoming, to provide a well-equipped women's hospital, or women's branch of a main hospital, in each district. Meantime, the establishment of welfare centres is being encouraged, and satisfactory results have accrued from the activities of welfare organizations in the capital city of Nagpur, where the movement has naturally made the greatest headway. At the end of the year there were twenty-one centres affiliated to the provincial Red Cross Welfare Committee, which is entrusted with the direction of the movement, and it was expected that the opening of the full complement of thirty centres sanctioned for the province would be completed within a few months. The committee undertakes the training of health visitors and *dais*, and the arrangement of "baby weeks." In Nagpur seven centres have been established—the first in 1921—three being under the municipality, two (including a training centre) under the Welfare Committee, and two under branches of the Red Cross Society. It is considered that the ideal condition would be to have one small centre in each of the twenty-four circles into which the city is divided. The existing organization has, however, permitted the visiting and revisiting during early infancy of 4,387, or 63 per cent. of the total of 6,885 births recorded in the city. It has been found that the mortality rates per 1,000 births in respect of infant deaths under 1 month were 122.00 for the entire town, 109.64 for the cases visited, and 133.16 for other cases. These statistics relate only to the three municipal centres, and the "other cases" therefore include a number visited by other agencies, so that it is assumed that the mortality among those who were actually unvisited is probably even higher than the figures suggest. The mortality among cases visited is less than half the provincial average.

### Shillong Pasteur Institute.

During 1927, 1,142 patients visited the King Edward VII Memorial Pasteur Institute and Medical Research Institute at Shillong, in Assam, for antirabic treatment, and among them there were 11 deaths, giving a mortality of 0.96 per cent. A classification of patients according to the period which elapsed between the time of the bite and the time of arrival at the Institute brings out the importance of early treatment. Lieut.-Colonel J. Morison, the director, in his annual report, states that among the 316 cases which arrived during the first four days after the bite there was one death; among the 240 patients who arrived five, six, or seven days after the bite there were three deaths. These patients died in from twenty-five to thirty-one days after being bitten, and in them, and in another case which arrived ten days, and ended fatally thirty-eight days, after the bite there was no evidence that treatment had any effect. The interval between the bite and death in the remaining six fatal cases was from 52 to 156 days, and it is suggested that in this group the treatment may have had a delaying effect. While the numbers are small, Colonel Morison points out that they illustrate a feature of antirabic treatment of which two explanations have been given, these being (*a*) that in the first group the virus had at once been planted in a nerve where it was shielded from the action of the protective bodies generated by the treatment, and (*b*) that there are strains of virus against which the strain of vaccine used in a particular institute has no effect. The general result shown by the year's figures is that among Indian patients who arrived within the first week after being bitten the mortality was 0.57 per cent., while among those who arrived after longer intervals the mortality was 1.77 per cent. With the success in the treatment of kala-azar with antimony compounds, and the increased accommodation available elsewhere for patients suffering from this disease, only doubtful and difficult cases are now received at the Shillong Institute, and Colonel Morison therefore suggests that the experimental ward hitherto used for kala-azar patients should be opened for cases of other diseases, such as chronic dysentery and sprue, on which research work is now being carried out.

### Ranchi Indian Mental Hospital.

The accommodation for patients in mental hospitals in India appears in a number of cases to be inadequate. Reference was made in the *Journal* of October 27th (p. 768) to complaints of overcrowding in such institutions in Madras, in the Central Provinces, and in the Punjab, and

the report for 1927 on the working of the Ranchi Indian Mental Hospital, which receives patients from the provinces of Bengal and Bihar and Orissa, states that the congestion continued during the year. There is accommodation in the hospital for 1,286 patients—1,014 males and 272 females—and the daily average number under treatment was 1,410—1,182 males and 228 females. Owing to the lack of accommodation it was necessary to reject a considerable number of applications for admission as paying patients, while hydrotherapy could not be practised extensively as no suitable place was available. Early this year the management committee met to consider the questions of relieving congestion and providing additional buildings and staff, and its recommendations are receiving the attention of the local Government.

# Scotland.

### Passing of the Board of Health.

THE last meeting of the Scottish Board of Health was held in Edinburgh, on December 28th, 1928, and on January 1st, 1929, the functions and duties of the Board were taken over by the new Department of Health for Scotland. Dr. Walter Elliot, M.P., presided at the meeting. Reference was made to the retirement of Sir James Leishman, who was chairman of the Board, and the members resolved to place on record their high appreciation of his valuable services. Dr. Elliot recalled that Sir James Leishman first entered public life in 1903 as a member of the Edinburgh School Board, and in this capacity was specially associated with the development of evening continuation classes in Edinburgh. In the same year he became a member of the Edinburgh Town Council, and he afterwards continued to exercise an interest in educational matters as a representative of the town council on various educational institutions of the city. After six years' service on the town council he was elected to the important post of city treasurer in 1909. When the National Insurance Act was passed in 1910, and the National Health Insurance Commission was entrusted with the task of bringing its provisions into operation in Scotland, Sir James Leishman was appointed chairman. To this difficult task he brought organizing ability and driving power, which were invaluable in the successful inauguration of the scheme, and recognition of these services was made by the honour of knighthood being conferred on him in 1914. Since 1925 he had also been closely connected with the scheme of contributory pensions for widows, orphans, and aged persons, which was interwoven with that of health insurance by the passing of the Contributory Pensions Act in 1928. When the National Health Insurance Commission was merged with the Local Government Board of Scotland in the Scottish Board of Health in July, 1919, Sir James Leishman became a member of the new Board, and in March, 1928, he was appointed chairman. In this capacity, Dr. Elliot concluded, he shared in the responsibility for the administration of a great variety of subjects that came under the power of the Board in connexion with the various health services of Scotland.

### Proposed Radium Institute for Scotland.

At a meeting of the board of management of the Royal Infirmary, Edinburgh, held on December 17th, 1928, it was decided to take steps for the establishment of a radium institute for the treatment of patients suffering from cancer and other conditions amenable to radium. For this purpose the managers proposed to reconstruct "Beechmount," a large house on the southern slope of Corstorphine Hill, which was bequeathed to the Infirmary some years ago. The managers also resolved, if necessary, to devote from the unrestricted funds of the Infirmary a sum of £40,000 to carry out this scheme and to provide accommodation for some thirty in-patients. It is intended that the institute should serve more especially for Edinburgh and the south-eastern area of Scotland. This is the first to be proposed in Scotland. The services of the staff of the radiological department and other facilities of the Royal Infirmary will be fully available for patients in this institute, where it is proposed that a relatively large quantity of radium shall be available under the care of an expert physicist.

### The General Practitioner and the Public Health Service.

In his last annual report as medical officer of health for Aberdeen Dr. J. Parlane Kinloch, whose appointment as chief medical officer to the new Department of Health for Scotland was announced in the *Journal* of November 17th, discusses the relationship of the general practitioner to the public health organization. After dealing with the present inadequacy of hospital provision, which he suggests will be largely remedied by the unification of health services proposed by the Government, Dr. Kinloch states that there has been legitimate criticism of the failure to link the general practitioner with official services of his area. With every extension of the official health service the tendency has been to appoint whole-time officers to undertake the work, and he recalls that the British Medical Association is considering how the general practitioner may be enabled to participate in the official health service. The encroachment of public medicine on private practice, he states, is already practically complete; it is the declared policy of every political party to achieve an adequate health service for the whole community, and accordingly it would appear to be essential to incorporate the medical practitioner within the scheme. He expresses his personal conviction that "however admirable the administrative machinery of the Health Department may be, however adequate the hospital provision, however adequate the specialist, clinical, and laboratory aids to diagnosis and treatment, nevertheless the public health organization will fail to provide an adequate medical service for the community until such time as the general medical practitioner becomes an executive medical officer within the service." Dr. Kinloch contends that if the Government proposals are accepted they are at the parting of the ways, and that it is for the local authorities, the medical profession, and the public to determine whether the time is not overdue when the general practitioner should be re-established in his position of full responsibility as family doctor, responsible for watching over the family health, for the prevention of disease, and for utilizing to that end the whole of the efficient machinery that the local authority has provided. He is convinced that this is possible, and that, just as there must be complete interlocking between the work of the statutory health authority and the voluntary agencies, so the co-ordination of the work of the statutory health officer and the private medical practitioner within a complete medical organization will provide the adequate service that is the desire of everyone interested in social welfare.

### Presentation to Dr. John Wilson.

On the occasion of his retirement, and on the completion of his fiftieth year in practice in the district, Dr. John O. Wilson was recently entertained at a public dinner in Huntly, when gifts were presented to him and to his wife. In the course of the proceedings reference was made to the fact that the medical connexion of the family with Huntly had lasted for over one hundred years, Dr. Wilson's father having been indentured as apprentice to a surgeon in the town in 1828, and having been joined in practice there by his son fifty years ago. Provost Christie, who presided, praised the readiness with which Dr. and Mrs. Wilson had always assisted any worthy cause; the people of Huntly owed a deep debt of gratitude to them. Mr. Robert Milne, in presenting Dr. Wilson with an inscribed gold watch and a wallet of notes, recalled the difficult conditions which prevailed in medical practice in the days before the advent of the motor car. No one, he remarked, had ever heard the doctor complain of his life or of unreasonable or irritating patients; he had always been the soul of geniality, even temper, and kindly personality. His poorer patients had received the same care and unremitting attention as the well-to-do, and he had made many a visit expecting no reward but gratitude. In his public appointments he had worked quietly, but none the less efficiently. After referring to Dr. Wilson's connexion with the Volunteer and Territorial Forces, Mr. Milne expressed the hope that he would have many years to enjoy his well-merited leisure. Proposing the toast of

"The Guests," Dr. Taylor of Keith said that he had attended the jubilees of several medical practitioners who were almost all decrepit. On the present occasion they welcomed one who was still gay and debonair, and who still had the tonic smile with which he greeted his friends and patients fifty years ago, a sprightliness of gait, and a seat in the saddle which would be the envy of many a man twenty years younger. Dr. Wilson, by his kindness and skill, had endeared himself to thousands of patients in Stathbogie and the district, and had always been most popular with his colleagues. In replying, Dr. Wilson expressed his warm appreciation of the kindness and honour shown towards him, and in a witty speech discussed the great developments in medical practice in his lifetime, recalling also many amusing incidents in his father's career in Huntly.

### Presentation to Dr. W. G. Stevens.

Dr. W. G. Stevens, who is retiring from the post of medical officer of health for the burgh of Renfrew after fifty years' service, was, on December 26th, 1928, made the recipient of a presentation, when Provost M'Gregor handed over to him an address and cheque as a mark of appreciation by the town council and his friends of his long and faithful service in the burgh as medical officer of health and factory surgeon, and also as a medical practitioner. Dr. Stevens is now 88 years of age, and was a student under Lister when the latter took up his post in 1860 as professor in Glasgow Royal Infirmary. During his long career in Renfrew Dr. Stevens took an active interest in the local Volunteer and Territorial Forces, having been surgeon lieutenant-colonel to the 2nd Volunteer Battalion Argyll and Sutherland Highlanders, and afterwards lieutenant-colonel in the Territorial Sanitary Service of the R.A.M.C. He holds the Volunteer decoration for long service. Mrs. Stevens was presented with a gold brooch.

### Edinburgh Samaritan Society.

The fiftieth annual report of the Samaritan Society of the Royal Infirmary of Edinburgh has just been issued. The society was founded in 1879 to assist the families of patients by providing clothing and travelling expenses, and to help patients leaving the Infirmary by finding work for them, and in other ways. Patients in other hospitals of the city are now included in the benefits of the society, which also undertakes a share in general social service work relating to patients under treatment in the wards. In 1908 the society received a bequest of £19,000, which considerably strengthened its position, and it is further supported from year to year by voluntary contributions. The society now maintains three almoners, and during the past year dealt with 441 new cases, against 383 in the previous year, the visits paid by the almoners being 1,456, as against 1,298 in 1927. In the past year its expenditure was £202 in excess of its income, and an appeal for new subscribers is therefore being made.

## Ireland.

### The Future of Medical Teaching in Dublin.

DR. R. J. ROWLETTE, who is president of the Section of Medicine of the Royal Academy of Medicine in Ireland, delivered recently a thought-provoking address on the aims and methods of medical teaching in Dublin. He said that the primary duty of a controlling body, such as the General Council of Medical Education and Registration, or the Irish Free State Medical Registration Council, was to satisfy itself that the educational course and examination tests were such as to ensure the possession by those obtaining admission to the *Register* of a degree of knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery; but a council had to go further, and to assist the qualifying bodies by direct advice. The General Medical Council, in its life of seventy years, had maintained a sound standard, but it had inevitably tended also to produce an undesirable uniformity. Too strict standardization and too close uniformity hampered individual thought and checked progress. The Council had naturally been most concerned with English conditions, and the Irish Council would have to consider whether the needs of those about to practise in Ireland required any special attention, and to ensure full advantage being taken of the local special facilities for teaching. Some changes made in recent years under the influence of the General Medical Council were open to criticism: the extrusion of the preliminary sciences to a pre-registration period interfered with the cultural education of the student; the insistence on certificates in a large number of special subjects prevented a due appreciation of the fundamental principles of the great unities of medicine and surgery, and encouraged specialization prior to qualification; in midwifery and gynaecology the standard traditionally required by the Dublin schools had been lowered in recent years. The most distinctive feature of Dublin teaching was its practical character, and its heart was the resident student system; it was worth considering whether that system should be made compulsory. At present sufficient care was not taken to ensure that students attended hospital regularly. The aim of clinical teaching should be to render the student familiar with the condition of the patient by first-hand observation, and to let him see and practise the several methods of diagnosis and treatment; observation of the course of the disease from day to day was necessary, but wandering from hospital to hospital in the early clinical years prevented this consecutive study. In the later years, however, such wandering broadened the mind. The special facilities which Dublin possessed for the study of midwifery and ophthalmology should be fully used, but, at present, there was little provision for teaching gynaecology. The large number of small hospitals in Dublin, though in some respects advantageous, had certain grave disadvantages. The small amount of material at the disposal of any clinical worker hampered research. The organization of the smaller hospitals was necessarily faulty in that they were not supplied with adequate auxiliary staffs, and there was a tendency to replace personal consultation by a series of written communications. Medical education in Dublin was likely to lag behind that in other centres unless a method was found of amalgamating some of the smaller hospitals. It ought to be considered whether there were not certain definite needs of Ireland which should receive particular special consideration in an Irish school. In two subjects the Irish practitioner required special knowledge—midwifery and public health. The people of Ireland had a right to demand a higher standard of knowledge than the schools had yet required. There was almost no provision for research in Ireland, and without research education became lifeless. Recently the Rockefeller Foundation had given generous help to both universities, but much more was needed. Unless there was unanimity in the demand for funds, wherever the demand was made, success could not be expected. An attempt made by the Academy a few years ago had failed to arrive at unanimity, but another attempt on different lines might have more success. The Dublin School had a great past, it had stood the test of time, and had shown adaptability to changing circumstances. In the future it could show further powers of growth and adaptation, but it was necessary to watch for signs of weakness, to promote development where this was desirable, and to remember that a school was a living thing.

Sir William Taylor (President of the Royal Academy of Medicine) emphasized the importance of reducing, not the teaching, but where possible the cost of it to the student. He deprecated in strong terms any tendency to specialization on the part of students of medicine, and urged that this should not be encouraged till after qualification. The study of large groups of cases of one disease by doctors particularly interested in that disease tended to the advantage of medical men and the general public; amalgamation of hospitals was necessary for such study to be practicable, and if the Dublin School was to regain its former position as a pioneer in medicine such amalgamation was necessary. Professor H. F. Moore emphasized the importance of maintaining and increasing close co-operation between the Dublin schools of medicine; he foresaw many advantages which would follow from it. Professor T. G. Moorhead deprecated any revolutionary changes in the student's curriculum, the object of which should be to

impart a thorough knowledge of the essential principles of medicine, surgery, and midwifery. Sir John Moore defined the status and powers of the General Medical Council; its position was purely that of an advisory body, and it had no power to alter the curriculum of any licensing body. Dr. Bethel Solomons advocated strongly a period of residence in a maternity hospital.

### Vital Statistics for the Irish Free State.

The report of the Registrar-General of the Irish Free State for 1927 states that the estimated population at the middle of the year was 2,957,000; the population according to the 1926 census was 2,971,992. Deaths in 1927 numbered 43,677, or 1,937 more than in the previous year. The number of emigrants in 1927 was 27,309, and of immigrants 2,084. The death rate was equivalent to a rate of 14.77 per 1,000 of the estimated population, which is lower than the average for the previous ten years, but higher than the rate for 1925 (14.62) and 1926 (14.05), the increase being due chiefly to influenza and heart and respiratory diseases. In the epidemic diseases group Dublin county borough, with 1.59 per 1,000, had the highest rate of any county or county borough; the rate for the whole country was 0.52. The number of deaths from tuberculosis was the lowest yet recorded, deaths from all forms of the disease numbering 4,301, or 1.45 per 1,000. The corresponding rate in Northern Ireland was 1.41, in England 0.97, and in Scotland 1. The number of deaths from cancer—3,113—in 1927 was the highest yet recorded, being 92 more than in 1926; the increase occurred entirely among men. Deaths from bronchitis numbered 2,610 and from pneumonia 2,883, showing increases of 177 and 519 over the 1926 figures. The number of deaths of infants under 1 year of age registered in 1927 was 4,254, or 71 per 1,000 births, as compared with 74 in 1926, and an average of 75 for the ten years 1917–26. In recent years the infant mortality rate has tended to increase. The infant death rate in rural areas was 56 per 1,000 births, in urban areas 99 per 1,000, and in Dublin county borough 123 per 1,000. For Northern Ireland the infant mortality in 1927 was 78 per 1,000, for England and Wales 70, and for Scotland 89.

### Galway County Hospital.

Galway Hospital Committee has adopted the recommendations of the visiting committee and the medical staff as to the filling of the vacancy created by the death of Dr. Michael Davitt, visiting physician to the hospital. It is proposed that the salary, heretofore £600, be divided equally between the surgical and medical officers, giving £150 each to the surgeons, Mr. M. G. O'Malley, F.R.C.S., and Dr. R. B. Mahon, as annual honoraria, to cease when they no longer hold chairs in the University. The committee further recommended that two physicians be appointed—one to be honorary, for the present, provided he holds a chair in the University. The salary for the paid physician, it is suggested, should be £300 a year, provided he does not hold a chair in the University; if at any period he is allocated to a part-time chair the salary payable from the rates is to be reduced to £150 a year. The position is restricted to male persons under the age of 40, with at least five years' practice, and holding the degree of M.D. and the D.P.H. The appointment will be part-time, and the holder must practise only as a physician —both inside and outside the hospital—while his salary remains at £300.

### Appointments at Coombe Hospital, Dublin.

Dr. Timothy M. Healy, late Assistant Master of the Coombe Hospital, and son of Mr. T. M. Healy, K.C., was recently elected Master of the Hospital for the usual term of seven years at a special meeting of the board of guardians and directors. Dr. Healy graduated M.B., B.Ch., and B.A.O. at the National University of Ireland in 1921. Dr. Ninian Falkiner has been elected by the directors to the post of gynaecologist to the hospital in succession to the late Dr. L. Cassidy. Dr. Falkiner was Assistant Master in the Rotunda Hospital for the maximum period of three years, and was mainly instrumental in organizing the pre-natal clinic in connexion with that hospital.

### Professor D. T. Barry.

The President of the French Republic has appointed Professor David Thomas Barry a Knight of the Legion of Honour. Professor Barry, who has held the chair of physiology at University College, Cork, since 1907, received his medical education at the old Queen's College there, in Liverpool, and also in Paris. He graduated M.B., Ch.B.R.U.I. in 1894, proceeding M.D. in 1903; four years later he was admitted to the Fellowship of the Royal College of Surgeons of England.

## England and Wales.

### Home Service Ambulance Committee.

THE report of the Home Service Ambulance Committee of the Joint Council of the Order of St. John and the British Red Cross Society for the third quarter of 1928 shows that at the end of September there were 294 of the committee's ambulances in service, and 61 affiliated stations, making a total of 355; the number of patients carried during the quarter was 29,656. The report refers to the advantages gained from the adoption of the county as the basic unit for the organization of the service, and so thoroughly is the country equipped that there should now be no part which cannot be reached by a motor ambulance within a reasonable time. In connexion with finance, however, it is noted that there does not seem to be a universal appreciation of the extent of the support that, by energy and perseverance under a well-organized system, may be obtained from the general public for ambulance work. While an agricultural county may achieve such success as to be able, largely from its own resources, to provide for the replacement of its ambulances as they become worn out, other counties experience difficulty in providing adequately for maintenance, and, when new ambulances are required, appeal to the committee for the whole cost. The hope is expressed that all county representatives and committees will endeavour so to organize their areas that they may look to the future, not only without fear as to the permanence of the service as it is, but with the assurance that there shall be steady progress in the provision of improved ambulances, and consequently greater efficiency of service. The quarter under review proved a particularly busy one in the matter of road accidents, in connexion with which 2,852 cases were carried in the ambulances. There was a considerable increase in the number of roadside first-aid stations manned by members of the associated organizations during holidays and week-ends. At one of these stations a roadside appeal to motorists for assistance in meeting the cost of providing a hut, surgical equipment, and a telephone yielded in two days nearly £150.

### Smoke Abatement League.

During the first part of the year ending June, 1928, the lack of secretarial assistance hindered the development of active propaganda work by the Smoke Abatement League of Great Britain, but some progress was made later. The annual report of the league mentions that at a conference last March, in Manchester, held jointly with other interested bodies, Dr. H. A. Des Voeux read a paper on the Public Health (Smoke Abatement) Act, 1926, the subsequent discussion being opened by Dr. R. Veitch Clark. A conference under the auspices of the Scottish branch was held in Glasgow in May, when it was decided to press for the application of a similar measure to Scotland. Efforts are being made to secure a wider measure of support for the work of the league by means of newspaper publicity, lectures, and correspondence with members and prospective members of municipal corporations. An appeal for subscriptions, which was addressed to about 290 local authorities, did not, unfortunately, secure a very cordial response. After the close of the year under review a conference was held at Harrogate, on September 29th and 30th, when the secretary of the league, Mr. Arnold Marsh, presented a report on an inquiry into the experience of users of solid smokeless fuels. This report contains an

interesting summary of the advantages and disadvantages encountered in the employment of such substitutes for coal. In general, and notably in respect of heat efficiency, economy, and cleanliness, users have found the various brands of smokeless fuel on the market superior to coal. Copies of the report, and of a paper on the influence of air pollution on vegetation, read on the same occasion by Mr. W. W. Pettigrew, general superintendent of the Manchester Parks Department, may be obtained from the offices of the league, 23, King Street, Manchester. The British Medical Association is represented on the council of the league by Dr. G. Clark Trotter and Mr. Bishop Harman.

### London By-Laws for Nursing Homes.

By-laws with regard to nursing homes in the county of London under the Nursing Homes Registration Act, 1927, have been approved by the London County Council. The by-laws are based on the model laws issued by the Minister of Health, with certain alterations, to which the Minister sees no objection. One of the alterations is the substitution in the by-law No. 1, to meet the special circumstances of London, of Section 55 of the Public Health (London) Act, 1891, for the Infectious Disease (Notification) Acts, 1889 and 1899. The other alteration is the addition of a proviso to the by-law No. 3. This by-law lays it down that the keeper of a nursing home shall keep a case record giving a daily statement of the health of every patient in the home suffering from acute illness, and, if it is a maternity home, of every mother and infant, as well as a periodical statement of health of any other patient. To this the London County Council adds the proviso, not in the model by-law, "provided that such statement need not include any medical record relating to the patient." It is proposed to append to the by-laws suitable notes referring to the provisions of the Act as to the inspection of premises and the keeping of records, the definition of a maternity home, and the penalties for infringement of the by-laws. The by-laws, after they have been confirmed by the Minister, will be enforced by the Council.

### Instruction in Health Work and Nursing at Hull.

With the approval of the Ministry of Health a scheme of training for health visitors has been arranged at Hull. Theoretical instruction will be provided at the University College, while practical teaching will be given in the public health department of the city. During the practical part the students will rank as probationer health visitors, and receive a salary from the corporation. The number of probationers under the Hull Public Health Department is limited to six annually. They are required to have had three years' training in a general hospital approved by the General Nursing Council for England and Wales, to possess the certificate of the Central Midwives Board, and to undertake to remain as probationer health visitors in the service of the Corporation of Hull for a period of twelve months. They will obtain experience of the work in the school medical and antituberculosis departments, as well as of the usual activities of a health visitor. It is proposed also to provide instruction at University College, Hull, in certain parts of the examination for the diploma in nursing of the University of London. The lectures will cover the subjects of Part A of the syllabus, which must be taken by all candidates, and also most of Part B, Section 8 (elementary economics, sociology, and hygiene in relation to the duties of public health nurses). If there is sufficient time a course in the methods of teaching and the elements of educational psychology will also be provided. Further information may be obtained from the secretary, University College, Hull.

### Changes in Medical Practice.

Dr. R. W. Marsden took as the subject of his recent presidential address to the Manchester Medical Society "Changes in medical practice in the last forty years." He said that during the period under review a prominent feature of medical practice had been the increased attention given to prophylaxis. He instanced in this respect the wide ramifications of the public health service, and suggested that by its continual encroachments on private practice it might in the end necessitate the formation of a State medical service. He then referred to the changes which had taken place in the manifestations, management, or prevalence of certain diseases; to the rarity of once common diseases such as chlorosis, cirrhosis of the liver, polyneuritic psychosis, delirium tremens, and gout, attributing the first-named to notable change in social ideas and customs in the female sex, and the others to a more or less compulsory increase in sobriety. Dr. Marsden next spoke of the apparent decline in frequency of "dyspepsia" and "indigestion," and the apparent increase in frequency of ulceration, particularly ulcer of the duodenum, and its occurrence more especially among young male adults. The introduction of *x*-ray examination with opaque meals, and the enormous advances in the surgery of the abdomen, had, however, so revolutionized work and ideas on these subjects that it was difficult, if not impossible, to compare the conditions of forty years ago with those of the present time. Turning to the great increase in the number of cases of neurasthenia and of the various psychoses, he expressed the opinion that to a large extent this was a direct or indirect consequence of the war. Dr. Marsden then mentioned the changes in our knowledge of venereal diseases and their treatment; the introduction of serums and vaccines; the value of lumbar puncture; the advances resulting from the vast science of immunology; the importance and complexity of the various blood examinations; the attention given to the endocrines and vitamins; the use of artificial sunlight and other rays, as well as of radium, and the various forms of electrical energy. Finally, he asked whether there was any evidence of a new disease having appeared, citing particularly encephalitis lethargica and trench fever, and came to the conclusion that it could not be said that these were new developments.

### Public Conveniences in London.

An inquiry into the public conveniences of London, their number, distribution, adequacy, and sanitary condition, has just been conducted by officers of the London County Council. The earliest general legislation on this subject was embodied in the Public Health Act, 1848, but it was not until the Public Health (London) Act, 1891, that there began to come into existence the now familiar underground vaults, with their white tiles, mosaic floor, and white glazed earthenware stalls. These conveniences, situated as far as possible on island sites in busy thoroughfares, took the place of old iron structures, with troughs and basins, which were always unsatisfactory and often foul. Since the nineties a great change has taken place in the social habits and conditions of the people of the metropolis, and this has made it necessary to review the existing provision and to determine its adequacy. During recent years an enormous number of women have entered the ranks of those who come daily from suburban to central London to pursue their occupation. The increase in road traffic and in facilities for public entertainment, and the habit of shopping at a distance, are all factors which lead to more people being away from home, and for longer periods, than formerly. For women, the present provision in central London is wholly inadequate, assisted though it is to some extent by special provision at restaurants, stores, and railway stations, the latter being preferred to the municipal provision on account of their greater privacy. Even for men the provision would be barely adequate were it not for a good deal of privately provided accommodation with access of a quasi-public character. In the outlying districts the public provision is very scanty; there it has been the custom to rely largely upon the accommodation which public-houses can offer, but the diminution in numbers of public-houses and the curtailment of opening hours has restricted this provision, which in any case was not very satisfactory. Dr. F. N. Kay Menzies, the medical officer of health to the Council, states that, apart from the great inadequacy of the provision for women, the principal need is for some improvement in directional indications to the whereabouts of the public conveniences; such directions should be as prominent as possible, while the accommodation itself should be inconspicuous. He adds some reference to the conditions in Continental capitals. In Berlin the construction of underground conveniences is now being pushed forward, and those above ground are being eliminated. In Paris by far the larger number of conveniences are above ground, and are used indiscriminately by men and

women; in the underground lavatories, numbering only thirteen at present, separate accommodation for the sexes is provided. In Rome there are only thirty-nine public lavatories, thirty-three of which are on the street level, but there is a good deal of semi-public accommodation at the restaurants and like places, and the same is true of Vienna, which has eighty-six public lavatories, of which only five are underground. In London the local authorities maintain 668 conveniences for men, 233 of them with w.c.'s, and the others with urinals only, and 184 conveniences for women. Dr. Menzies points out that while it would be ungracious to make comparisons where conditions are so different, yet the general standard of excellence of sanitation in London, the regard paid not only to decency but to delicacy of feeling, and the almost complete absence of gross nuisance, in spite of conditions of almost unparalleled intensity of occupation, constitute a civic achievement which no other city has surpassed. The London County Council is to give further consideration to the matter after the observations of the City corporation and the borough councils have been received.

### The Cicely Northcote Trust.

The nineteenth annual report of the Cicely Northcote Trust, which was formed in 1909 to extend to the wards the social service work of the almoners' department at St. Thomas's Hospital, London, covers the year which ended last October, and again presents an interesting survey of varied activities. The expenditure of the trust was about £178 in excess of its income; this was due partly to expense upon repairs to the trust's hostel, but also to an increase in the work undertaken, which makes extended financial support desirable. The trust employs four almoners for social work in the wards, and the report contains convincing evidence of the value of this auxiliary service to that of the hospital proper. Advice and assistance are given on matters relating to insurance, compensation, convalescence, employment, and in many other ways less easily defined. The trust is also responsible for seeing that all insulin needed by patients is obtained, and undertakes the duty of ensuring the regular attendance of patients receiving this treatment. Another valuable activity is the after-care of cancer patients, in connexion with which efforts are made in appropriate circumstances to find suitable employment; the number of cases on the after-care register increased during the year to 1,289. It is intended in the course of time to extend the premises secured last year as a centre and club for fathers and mothers belonging to the St. Thomas's maternity department. In connexion with the International Social Service Conference held in Paris some months ago, the interesting fact emerged that when the hospital social service was started in Holland at the Wilhelmina Hospital in Amsterdam in 1913 it was modelled upon that of the Northcote Trust; similar services have since been instituted, following this example, in fifteen other hospitals in Dutch cities.

# Correspondence.

## A HINT TO MEDICAL TESTATORS.

SIR,—During 1928 I have seen in the press particulars of the wills of fully ten or a dozen medical practitioners who obviously, from the details given, had no dependants. Large sums were bequeathed to various deserving charities; but nothing at all to those charities which should have the first call on members of the profession—that is, Epsom College and the Royal Medical Benevolent Fund.

The bulk of us, of course, have to think first of our families when making a will; but to those who have none I urge the duty of preference to the proper charities of our own profession. At Epsom College the council are engaged on the uphill task of collecting money to build a new sanatorium. After a year and a half of effort about one-fifth of the large sum required has been obtained. A few good legacies would enable a start to be made with this most necessary improvement: *a fortiori*, from those who can afford them, immediate contributions of any size will be most gratefully accepted.—I am, etc.,

London, S.W.5, Dec. 30th, 1928. HENRY ROBINSON.

## STANDARDS OF PUERPERAL MORBIDITY.

SIR,—All who are interested in obtaining reliable data regarding the frequency and distribution of puerperal sepsis and morbidity will agree with the Master of Rotunda when he says (*British Medical Journal*, December 22nd, 1928, p. 1155) that it is "most important that there should be absolute accuracy" in the standard of morbidity adopted. I should like, however, to point out that even if the standard of morbidity laid down by the British Medical Association is rigidly adhered to, reliable data will not necessarily be obtained. Puerperal morbidity is simply defined as a "rise of temperature to 100° F. or higher, on at least two occasions between the second and eighth days." But no instructions are given as to how the temperature is to be taken—whether in mouth or axilla. The same criticism applies to the standard of puerperal pyrexia laid down by the special subcommittee of the Royal Society of Medicine in 1925. It adopted the Strasbourg Convention standard which defined puerperal pyrexia as a "temperature of 100.4° F. (38° C.) or more, sustained during a period of twenty-four hours or recurring during that period."

Every ward sister knows that the mouth temperature is usually considerably higher than the temperature taken in the axilla. In order to test it, I took the temperature of a patient suffering from puerperal pyrexia. In the mouth the thermometer registered 100.4° F. after three minutes; after the same time in the axilla the same instrument registered 98.4° F.; this test was repeated with the same result. At University College Hospital all adult temperatures are taken in the mouth; at another large maternity hospital with which I am acquainted they are taken in the axilla. Obviously morbidity statistics from these two hospitals are quite incomparable. If unity in method of recording cannot be obtained it would be useful if a note were inserted in each hospital report stating definitely the standard of morbidity used and the method of recording adopted.

When the committee of the Royal Society of Medicine was sitting I wrote to the secretary drawing his attention to this point, but so far as I am aware no action was taken.—I am, etc.,

London, W.C.1, Dec. 28th, 1928. F. J. BROWNE.

## STREPTOCOCCAL VACCINES FOR PUERPERAL SEPSIS.

SIR,—Dr. R. R. Armstrong and Mr. Wilfred Shaw, in your issue of December 15th, 1928 (p. 1082), draw from their work the conclusion that the prophylactic inoculation of streptococcus vaccine had failed, in their hands, to prevent puerperal infections. Does their investigation really justify that conclusion? In their summing-up at the end of the paper they assert that "morbidity in the puerperium is in the main due to a single cause, the *Streptococcus pyogenes*."

It will readily be seen that the validity of the conclusion about preventive inoculation really depends upon the truth of this latter statement; for, clearly, if there had been very little morbidity due to this streptococcus among the inoculated women, and much due to other causes, the benefit of preventive inoculation, directed specifically against this one microbe, would not be apparent in the morbidity rates. It may be well, then, to ask what is the evidence for the statement that *Streptococcus pyogenes* is the chief cause of morbidity in the puerperium. Dr. Armstrong and Mr. Shaw give us none—and so far as I know there is very little available. True, it is generally accepted—and I think quite rightly—that this microbe is responsible for most of the puerperal septicaemia and for most of the deaths; but it does not necessarily follow that the same holds true for the minor sepsis—the "morbidity"—of the puerperium.

During the past seven months an inquiry has been proceeding at Queen Charlotte's Hospital which throws some light on the matter. Almost every "morbid" and "clinically septic" case occurring in the hospital during this period has been bacteriologically investigated—by culture from the interior of the uterus, by examination and

cultivation of the urine, and, where there was high fever, from the blood also. The results up to date have been as follows: 1,053 women have been delivered; 85 "morbid" and "clinically septic" cases of all degrees have been investigated—that is, practically all those in whom the febrile disturbance was judged to be due to infection arising from the genital or urinary tracts. Of these 85 cases only 6 have yielded a culture of *Streptococcus pyogenes*. In the remainder the predominant organisms recovered from cultures have been diphtheroid bacilli, *B. coli*, staphylococci, non-haemolytic streptococci, and various unidentified Gram-negative cocci and bacilli. The incidence of *Streptococcus pyogenes* infections may, then, be expressed as follows: 0.6 per cent. of the 1,053 women have developed morbidity associated with the presence of this microbe in the uterus; 7 per cent. of the group of "morbid" and "clinically septic" cases have been infected by it.

Possibly the investigation of a larger series will tend to raise these percentages somewhat. Meanwhile, it may be safely said that the figures fail to support the generalization of Dr. Armstrong and Mr. Shaw that *Streptococcus pyogenes* is the chief cause of morbidity in the puerperium; and they have, in consequence, an important bearing upon the statistical results presented by these authors. In the absence of evidence to the contrary, and in view of the fact that there was no epidemic in either series of cases, it would seem legitimate to assume that the incidence of infections by *Streptococcus pyogenes* among the St. Bartholomew's women was probably not greater than among those at Queen Charlotte's Hospital. (It may well have been a little less, owing to the fact that the Queen Charlotte's Hospital series almost certainly includes a larger proportion of difficult labours.) In that case, among the 668 women of the St. Bartholomew's series who received a prophylactic inoculation there would have been only four or five who might have been expected to develop morbidity due to infection by *Streptococcus pyogenes*. Surely in these circumstances there must be considerable doubt as to whether the determination of morbidity rates without bacteriological controls afforded a satisfactory basis for any conclusion. Any effect which the vaccination might have had could easily have been obscured by small fluctuations in the morbidity rate arising from causes other than infection by *Streptococcus pyogenes*.

Finally, I would submit that the same kind of criticism applies to the vaccine treatment employed by Dr. Armstrong and Mr. Shaw for the morbid cases of their second group. There must be considerable doubt as to how many of these cases were suffering from infection by *Streptococcus pyogenes*. Probably the majority were not.—I am, etc.,

London, W.2, Dec. 22nd, 1928. LEONARD COLEBROOK.

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SIR,—I read the paper of Dr. Armstrong and Mr. Shaw (December 15th, 1928, p. 1082), and also Dr. Arkwright's comments thereon (December 29th, p. 1193), with much interest; but I should like to submit that the conclusion that vaccines have no therapeutic value in puerperal sepsis must be limited to the type of vaccine used in the investigation. It is now some years since I published a paper in the *British Medical Journal* upon two residual vaccines designed for use in acute infections, and I do not think that I am overstating the case for them when I say that they do not often fail to render the patient convalescent within twenty-four hours. This is not the place to describe them in any greater detail, but it should be said that they give rise to no sort of clinical reaction or shock: either the patient becomes rapidly well or remains exactly as if no vaccine had been given. It is now beginning to be recognized that the therapeutic action of a vaccine and the nature of the underlying mechanism of resistance is not nearly so simple as was formerly assumed. At the same time, I doubt if protein shock affords an adequate explanation; amongst a number of other reasons is the fact that these two vaccines produce their results with not the slightest trace of shock.—I am, etc.,

Manchester, Dec. 29th, 1928. C. E. JENKINS.

## INVESTIGATION OF MATERNAL MORTALITY.

SIR,—The decision of the Maternal Mortality Committee to institute inquiries by public health officials into maternal deaths raises issues of great importance to general practitioners. We are told that the investigations are directed towards improving the maternity service of the country, but we are not told anything about the need for these investigations; we are not told what sort of information the Committee hopes to obtain that could not be obtained by other means, and we have not been asked whether we are willing to co-operate in this scheme.

General practitioners are as anxious as anyone to reduce maternal mortality, and I believe that they would not object to some form of consultation, with its traditional safeguards, to discuss a maternal death, but they object very strongly, I am sure, to any form of inquest.

To my mind there are grave objections to the Committee's scheme as it has been presented to practitioners:

1. The possibility of coercion. "I take it that if a doctor resents the inquiry he will say so." I quote an eminent public health official, and this, presumably, is the view taken by the Committee. The implication is clearly that if the doctor does not express his resentment the inquiry will be held. It is difficult to see what justification the Committee can have for acting on the assumption that if a doctor resents the inquiry he will say so, because it is obvious that the assumption may be mistaken and that such a mistake may be followed by very serious consequences. Let me put it in this way. A practitioner receives a letter to the effect that the county medical officer of health is directed by the Minister of Health to investigate the death of Mrs. X, and will be obliged if the practitioner will meet him. The doctor resents the inquiry, but, far from saying so, it never occurs to him to refuse to meet an official who comes down with all the prestige of the Minister of Health behind him. So that the investigator gets his information, but he gets it simply because the practitioner is overawed by his authority and feels compelled to speak. In my opinion an investigator who takes advantage of a feeling of compulsion to extract information is guilty of coercion, and whether he does so deliberately or unconsciously makes little difference to the victim. I submit that the bare possibility of coercion is intolerable, and especially so when this possibility can so easily be removed; all that is required is a second letter to practitioners asking them whether or no they are willing to have their cases investigated.

2. The answers to the following questions should have been made clear to practitioners:

(*a*) Does the Maternal Mortality Committee propose to proceed with an investigation in which the doctor in attendance declines to collaborate? As the matter stands at present there is reason to believe that this is the intention of the Committee.

(*b*) Is it clear that the investigator must not question relatives or nurses without first obtaining permission of the doctor in attendance?

(*c*) Is it the intention of the Committee that its investigators should try to find out whether the disaster of a maternal death is attributable to lack of skill or care on the part of the practitioner or nurse?

3. The question of legal privilege is not made clear. In an explanatory note it is stated that information given on the inquiry form will be treated as strictly confidential. It is safe to say that a promise of secrecy signed by the Prime Minister himself would not induce a judge to go beyond established precedents in the matter of privilege, and that it would probably take an Act of Parliament to protect practitioners in the courts. In view of this difficulty practitioners may reasonably be asked to risk the question of "privilege," but if they do risk it it should be with their eyes open. It is very unlikely that the Committee would undertake to indemnify a practitioner who relied on its promise of secrecy and who had suffered in the courts in consequence. Perhaps one of the maternal welfare societies would agree to pay compensation. It is a possibility that might be explored.

4. There are other matters which are at present extremely unsatisfactory. One example must suffice. At the end of the inquiry form, after the space for the

comments of the doctor, there is a third space which gives the investigator the opportunity to add allegations which the doctor has no means of refuting.

I suggest, Sir, that the Maternal Mortality Committee should reconsider its decision, that a scheme with adequate safeguards should be worked out and submitted with full explanation of its scope and limitations to practitioners, and that practitioners should be asked to say whether or no they are willing to co-operate in the scheme submitted to them.—I am, etc.,

Wetherby, Dec. 26th, 1928. R. L. KITCHING.

## RADIUM AND CANCER.

SIR,—My attention has been drawn to a paragraph in the *Times* Weekly Edition of September 13th, 1928, headed "Radium and cancer," and quoting a statement by Mr. T. W. Paulin. In the course of this he refers to a "new technique" for the application of radium which has given most encouraging results.

> "The new technique, which has been in use on the Continent, at Brussels in particular, for some time past, consists in inserting a number of needles containing radium all round the cancerous growth . . . in favourable cases the growth is not only destroyed, but is prevented from spreading to the surrounding tissues."

This is perfectly correct, save for the statement that the technique referred to is new, and the inference that it was evolved on the Continent.

The technique was fully worked out here in Dublin, and has been in constant use for the last thirteen or fourteen years. The nature and theory of the technique were dealt with by the writer in a paper which appeared in the *Scientific Proceedings* of the Royal Dublin Society, May, 1914, p. 290 et seq., "On the local application of radium in therapeutics"; and evidence of its remarkable practical success appears in a paper contributed by Dr. Walter C. Stevenson to the *Dublin Journal of Medical Science* for March, 1915.

The following quotation from the latter paper shows that Dr. Stevenson was then quite cognizant of the value of boundary treatment as referred to in Mr. Paulin's statement. Dr. Stevenson is speaking of a case of cancer which, originating in malignant polypi of the nose, had, among other lesions, caused proptosis of the eye. With the object of inhibiting the growth from increasing upwards and pressing on the eyeball, Dr. Stevenson arranged a line of needles immediately under the orbit. His treatment had the desired effect. Dr. Stevenson adds: "This systematic radiation of a growing edge is only possible by the needle method, and is one of its great advantages." It is, therefore, evident that in every particular the technique Mr. Paulin refers to has been in use in this city since 1914 and 1915. So far as I know it originated and received its earliest trial and publication in connexion with the work done in the Radium Institute affiliated with the Royal Dublin Society.—I am, etc.,

J. JOLY, Sc.D., F.R.S.

Trinity College, Dublin, Dec. 18th, 1928.

## THE INTERNATIONAL CANCER CONFERENCE.

SIR,—Our attention has been drawn to a statement—presumably a commentary on the recent Cancer Conference in London—by Dr. A. Leitch, which has been widely disseminated through the lay press. In this occurs the following remark: "Unfortunately the discussion failed to reveal much support for this particular mode of treatment [lead therapy], and it was unsparingly condemned by some of those in England and America who had given it a serious trial." As the result of this and other statements in the lay press we are expected by our patients and by their doctors to allay the fears which he and others have created in regard to our method of treatment. This can most properly be done in the medical press.

In the above quotation it will be noted that it is stated that our method was "unsparingly condemned by some of those . . . who had given it a serious trial." The so-called "serious trials" that led to the unfavourable opinions of which Dr. Leitch speaks must have been those mentioned in the report of the Cancer Committee of St. Bartholomew's Hospital, in that of the London Cancer Hospital with which Dr. Leitch is connected, and in the remarks of Dr. Burton Simpson of Buffalo, U.S.A.

At the Conference we treated the Bart's report more kindly than it deserved. We did, however, point out that it was hardly worthy of consideration for several reasons, one of which was sufficient to put it out of court—namely, that only twenty cases had been treated, and that of these fifteen were too ill to receive more than a very small, in some an infinitesimal, quantity of lead!

The remark made by Mr. Hume, who read the Bart's report, that the administration of lead converts the patients into "physical wrecks"—repeated in the press in headlines—was, we think, unfortunate, for it demonstrated only *his* inability to conduct the treatment properly. We are sure that if Mr. Hume could read some of the letters received from patients treated in Liverpool concerning the reports of his remarks as published in the lay press he would realize that he has still much to learn. We ourselves have observed no really serious reaction in any patient for some years. However, this report stood condemned by the illogical character of the evidence adduced.

With regard to the other report, that of the Cancer Hospital, the production of this at the Conference was a most unusual procedure, for the "observations" on which it was based had been published in the *British Medical Journal*[1] a short while previously—an action which could hardly fail to prejudice the discussion in advance. The interview granted to the lay press two or three days before the discussion by a member of that hospital staff, and the terms in which he then spoke of the treatment, must also have had a prejudicial effect.

It is, however, now necessary to recall what happened on the first publication of the report of the London Cancer Hospital, when it was severely handled by various correspondents in the *British Medical Journal*. Mr. Duncan Fitzwilliams wrote:[2] "From the results of this administration—I cannot call it investigation—Dr. Wyard [physician to the London Cancer Hospital] expresses an adverse opinion on the method of treatment by lead. It would be fairer, surely, if he had expressed an adverse opinion on his method of treatment by lead. Can any fair-minded or logical man say that anyone is justified in drawing conclusions from material such as this? I cannot think that even the most ardent opponents of the method . . . would care to quote such evidence."

We ourselves stated[3] that it was doubtful whether Dr. Wyard "ever seriously attempted to give the treatment a fair trial" at the London Cancer Hospital, and, among other criticisms, we demonstrated that Dr. Wyard had been lacking in "scientific and clinical acumen," and had drawn his conclusions "from this assembly of clinical and scientific errors."

With regard to Dr. Burton Simpson's remarks, although he spoke unfavourably of the method, it is interesting to note that in the report submitted he confesses that "all cases treated were in an advanced stage of the disease, and had previously been subjected to surgery or to radiation, or to both." Insufficient details are given to enable us to judge his methods of treatment, but he informs us of the terrible reactions from which his patients suffered. In support of his statements Dr. Simpson quotes Dr. Soiland, who treated thirty-one apparently similar cases and noted that "four are in good condition," and that in them the disease had been "apparently arrested"! Further, Dr. Simpson, with one of his colleagues (Dr. Marsh), had previously published[4] certain experimental work which was confirmatory of, rather than adverse to, our views.

Can these efforts be considered "serious trials," or must we simply regard them as the most serious work of which these authors are capable? The public, it seems, must be warned once more that the treatment is not only useless, but dangerous in unskilled hands. Professor Carter Wood of Columbia University, whose authority and caution in cancer research is undoubted, Dr. Loewy and Dr. Loiseleur of Paris, Professor W. Caspari of Frankfurt-a-M.

[1] *British Medical Journal*, 1928, i, 838.
[2] Ibid., 1928, i, 1047.
[3] Ibid., 1928, i, 958, 1087.
[4] *Journ. Cancer Research*, 1927, xi, 417.

and Dr. A. P. Thomson of the Birmingham Cancer Committee gave encouraging reports. Others present, who had done a considerable amount of work on the subject, were prepared to speak in the same vein had the opportunity been given to them. As it was, we and many others left the meeting under the impression that a large majority was in sympathy with our work. This view has been confirmed by subsequent correspondence.

The refutation of ignorant criticism does not, of course, prove the value of the work condemned, and we would be the last to blind ourselves to this. Positive evidence alone can establish the promise of any effort. This we and other workers elsewhere have adduced, and, we hold, in a cautious manner. The following statement made by Professor Carter Wood at the Conference is surely the correct attitude of the really scientific man.

"It is evident from . . . carefully worded reports that the method is not at present one of general applicability, because of the high degree of clinical skill which is necessary for the proper treatment of patients and the dangers of the drug itself. Nevertheless, the fact that it is possible to cure even a relatively small number of otherwise hopeless patients is so important a discovery that every assistance should be offered . . . in the arduous work of ultimately defining the best practice of administration, in studying the method of action of the lead, and in attempting to improve the product." (Report of Cancer Conference, p. 204.)

In order that the profession may have more than fragments from which to judge, we hope in the spring to publish a volume in which our researches will be presented as fully as possible. Meanwhile, we would submit that the long-continued subversive attitude to our own work of Dr. Leitch, whose methods were so resented by the profession in 1926, is greatly to be deprecated, and should call for the serious consideration of all those who have the interests of cancer research at heart.—I am, etc.,

Liverpool, Dec. 19th, 1928. W. BLAIR BELL.

## HEART SOUNDS.

SIR,—While heartily agreeing with Dr. Samways (December 8th, 1928, p. 1065) in his defence of the old-fashioned view as to the production of the heart sounds and also of the "pre-systolic" murmur, I feel that a word of physiological protest must be uttered with regard to his suggestion that, in spite of the absence of valves or adequate sphincter muscles, the auricle can develop a force comparable with that of the ventricle.

I think that before many more decades have passed the views expressed by Dr. Mayo Collier in 1889 in his able little book *The Physiology of the Vascular System* will have been generally accepted. This view was that the auricle is simply a reservoir from which the ventricle can fill itself during its very brief expansion phase (I believe it lasts only for one-tenth of a second).

The function of the appendix, however, is a more active one, for by a vigorous contraction it shoots a small quantity of blood through the closed (but not stretched) auriculo-ventricular valves into the ventricle, thus completing the filling of the ventricle and the stretching of its valves just prior to systole. As an addition to Dr. Collier's theory I believe that this sudden stretching of the heart muscles stimulates them to contract, and is, as it were, the spark which fires the powder.—I am, etc.,

Birmingham, Dec. 19th, 1928. T. STACEY WILSON.

## DENTAL CARIES AND VITAMIN D.

SIR,—In his letter published on December 22nd, 1928 (p. 1155), Dr. J. Sim Wallace refers to some "essential facts" from which Mrs. Mellanby and Dr. Pattison's paper tends to divert our attention. So far as I can determine from the letter the "essential facts" seem to be: (1) that the addition of one ounce of bacon and half an ounce of cooking fat to a dietary will serve to retard caries; (2) that the addition of two ounces of sugar will serve to initiate caries. May I ask where one can find records that prove such implied statements to be facts? Why is sugar said to be more conducive to dental caries than any other carbohydrate? These, if facts, are vitally important, but one wants proof, not mere ex cathedra statements from an "authority." To prove these facts with proper controls must have involved great labour and care, comparable perhaps to the amount of labour and thought Mrs. Mellanby has given to her task.—I am, etc.,

Sheffield, Dec. 27th, 1928. A. E. BARNES.

SIR,—In your issue of December 15th, 1928 (p. 1079), you publish a paper by Mrs. Mellanby and Dr. Lee Pattison which, as you say in a leading article, is the latest of a long series relating to dental caries. The writers point out that their new group, $A_3$, has an average age of 5½, while the old (1926) Groups, $A_2$, $B_2$, $C_2$, are aged nearly 9, but they do not seem to attach much importance to the difference. They admit that the two groups are "not necessarily strictly comparable," but it does not seem to occur to them that some people might doubt if they were more than roughly comparable. Moreover, in a previous communication, they told us that Groups $A_2$, $B_2$, $C_2$ were all suffering from bone tuberculosis, but they do not think it worth while telling us whether the children of Group $A_3$ are suffering from the same disease. Are the children not necessarily strictly comparable in this respect as well?

The first thing that strikes one about the experiments themselves is that the duration is very short—about three months. This is roughly the shortest interval at which a dentist sees his small patients, and when he does see them so frequently he often finds that caries appears to be erratic. Some visits reveal several cavities, at others there are none. It is, of course, conceivable that the disease is intermittent, but a much more credible explanation is that diagnosis is erratic, while the disease is not. But if diagnosis of early caries is erratic even when performed by men who spend their lives using the mirror and probe, surely the writers are over-ambitious in trying to get comparative figures by the same means. To estimate the progress of caries may easily be more difficult still. The mouth of a cavity may remain unchanged for a short three months; does it follow that the inside of the cavity is also unchanged? Who, by looking at the outside of a tooth, can tell what is going on inside it?

I believe that the difficulties of the method used by the writers are so great that the results would have to be received with caution, even if the examinations had been made by dentists of experience and complete impartiality. Since writing the above I have seen Dr. Sim Wallace's letter. I confess I failed to detect the difference in diet which he has pointed out, but I entirely support his conclusions. The writers describe one adult patient, and she is almost a museum specimen, one of the fortunate few who, at the age of 22, are still unacquainted with the forceps or the dental engine. What one wants to know in a case like this is, not how much radiostol she had, but how she preserved her teeth for years before radiostol came. In any case, where twenty-nine teeth have taken care of themselves, the improvement in the remaining three is very doubtfully ascribed to radiostol.

It seems a pity that Mrs. Mellanby should spend her time on work of this inconclusive character, when, if her views are correct, a single set of experiments would go a long way to establish them. For if the inhibition of caries is due to pulp reaction, and this reaction is dependent on vitamin D, it should be a simple matter to produce caries experimentally, by giving a diet deficient in vitamin D to one group of animals, while a second group is kept caries-free on the same diet, *plus* the all-important vitamin. Why have not these experiments been made? Alternatively, if they have been made, why have not the results been published?—I am, etc.,

Oxford, Dec. 23rd, 1928. H. B. BARWISE.

## ASTHMA RESEARCH COUNCIL.

SIR,—In March, 1928, I communicated to you and you were good enough to publish (March 17th, p. 468) the scheme of investigation and research which the Medical Advisory Committee proposed to carry out as, and when, the financial support of the Asthma Research Council permitted.

During the last nine months this committee has obtained the co-operation of many physicians in the provinces and

the consent of their local hospitals for the formation of research centres when these can be financed by the council. By means of grants made by the Halley Stewart Trust and the Medical Research Council, an asthma clinic and research centre has already been formed at Guy's Hospital to continue Dr. G. H. Oriel's investigation into the biochemical causation and treatment of asthma, and to supplement and control the results of such treatment by comparing them with those obtained by other methods. A second grant by the Halley Stewart Trust has been given for the study of the characteristics of asthma occurring in childhood; and a special clinic is now being organized at Great Ormond Street Hospital to carry out this work. A research fellow, endowed by the British Humane Association, has already visited many Continental spas, and is now investigating the results of the physico-therapy methods there employed by means of apparatus installed by that Association.

In order to obtain fuller statistics concerning hereditary influences on this disease and on the general asthma syndrome, family history forms have been approved and printed. They can be obtained from the medical secretary, and the medical advisory committee trusts that medical men who are interested in this subject will assist in circulating them among suitable asthmatic patients.

The Asthma Research Council itself, having meanwhile been strengthened and reorganized, will inaugurate a national appeal for funds at a Mansion House meeting at 3 p.m. on January 15th. The Lord Mayor will preside, and Sir Humphry Rolleston, Dr. Arthur F. Hurst, Colonel F. E. Fremantle, M.P., and Mr. Ben Tillett, among others, will speak. The attendance of medical men will be much appreciated.

The Council desires to raise a sum of £50,000, and donations should be forwarded to the honorary treasurer at the Council's office.—I am, etc.,

T. T. JEANS,
Surgeon Rear-Admiral (ret.),
Secretary,
Medical Advisory Committee.

Asthma Research Council,
42, Ranelagh Road, S.W.1,
Jan. 1st.

## THE TREATMENT OF FEMORAL HERNIA.

SIR,—With regard to the letter from Mr. G. H. Colt in your issue of December 29th, 1928 (p. 1195), I beg to state that he will find that his queries were to some extent answered in an article on "The modern treatment of hernia" which I published in the *British Medical Journal* on January 27th, 1927. I there brought forward a comparatively large amount of evidence collected at the City of London Truss Society and at St. Bartholomew's Hospital, and tried to show (1) that femoral hernia recurred more often than was supposed after the "low operation" and after operations for the relief of strangulated hernia; (2) that the inguinal operation was efficient in a large series of patients with ordinary femoral hernia; (3) that a modification even of the inguinal operation was necessary in order to effect a cure in patients with large hernias—for example, with a wide neck to the sac, and with recurrences following the usual operation for strangulation.

After two years' further experience I have not found any reason for modifying the opinions which I then expressed.—I am, etc.,

GEOFFREY KEYNES.

London, N.W.1, Dec. 28th, 1928.

## MENTAL HYGIENE.

SIR,—The leading article in your issue of December 29th, 1928 (p. 1183), raises many of the problems that demand research and solution if the standards of mental health of the community are to be raised. America, through its much more elaborate organization, has gone further than we have in these matters, and there are few who will not agree with you that enlightened public opinion is needed. If, however, we are to get this, is it not necessary that there shall be an enlightened medical opinion first of all? Better education in psycho-pathology and the treatment of early mental disorder is needed in the medical curriculum, but it would seem almost more important at the present moment that some effort should be made to give the general practitioners throughout the land some better guidance than they have yet had in dealing with these matters. Between the psychotic disorders and the illnesses of organic origin lie the psychoneuroses and the conduct abnormalities of children and adults. The general practitioner does his best with these conditions, which form a considerable part of his practice, but he has insufficient knowledge of them, and consequently is unable to make the best use of such modern theories and psycho-therapeutic methods as are of proved value.

A suggestion was made at the Psychiatric Section at the Cardiff Meeting this year, which was well received by general practitioners present, that the Association should take up this matter and aim at arranging a short course of lectures for every Division throughout the country. The management of the insane patient needs to be mentioned, but it is perhaps more the province of the general practitioner to deal with the psychoneurotic disorders, and it is to this primarily that attention should be directed. Mental deficiency, with its therapeutic and legal aspects, might advantageously be brought into the course. From the great interest that medical men as a whole take in investigating any new and useful method of treatment it seems improbable that there would be much difficulty in securing attendance at short courses of this sort, and there can surely be found in the various medical centres sufficient lecturers able and willing to undertake them. The Mental Hygiene Movement could receive no greater impetus than would be given by a movement of this sort on the part of the British Medical Association to institute post-graduate study of these problems from the therapeutic and preventive angles.—I am, etc.,

J. R. REES.

London, W.1, Dec. 30th, 1928.

## SO-CALLED "WHITE ASPHYXIA" OF THE NEWBORN.

SIR,—Mr. Aleck Bourne's valuable letter in your issue of December 15th, 1928 (p. 1109), has been followed by communications which show clearly that the time is ripe for a general discussion on this important subject. It is probable that there would be a fairly wide acceptance of the view that the white baby is "shocked" rather than asphyxiated; but shock of the newborn is by no means identical with surgical shock of the adult, and the differences between the two conditions require to be defined as clearly as possible.

A discussion on this subject would not only help to clarify our views of a common and serious disability, but would serve to emphasize the need for more extensive investigations of foetal and neo-natal physiology, pathology, and pharmacology. Much has been done in recent years, but much remains to be accomplished.

Mr. Bourne has outlined his treatment of neo-natal shock, and it is probable that most clinicians would agree with him in general terms; but the actual details of treatment, including the use of lobeline, as well as the drugs mentioned by Mr. Bourne, would provoke a most helpful discussion in which obstetricians, paediatricians, and general practitioners could all join with advantage.—I am, etc.,

NORMAN B. CAPON, M.D., M.R.C.P.

Liverpool, Dec. 30th, 1928.

SIR,—Mr. Aleck Bourne, in writing a plea for abolishing artificial respiration for white asphyxia of the newborn, states of direct mouth-to-mouth insufflation, "Here nothing can happen but inflation of the stomach through the oesophagus." This, Sir, is surely too dogmatic an assertion. I can only state, equally dogmatically, that in the four cases in which I have used this method—other measures having failed—the lungs were inflated and natural respiration afterwards occurred. In one case this natural respiration was intermittent, and continued for some ten minutes only, when the child died; but in the other three cases healthy living children resulted. The method is unpleasant and, perhaps, not very safe for the operator; but I have no doubt whatever that, in many cases, it is the only hope for the child.—I am, etc.,

W. A. TRUMPER, M.R.C.S., L.R.C.P.

Devon, Dec. 21st, 1928.

## TONSIL AND ADENOID OPERATIONS.

SIR,—I am in complete agreement with much of Mr. Tilley's contribution to this discussion (December 29th, 1928, p. 1194), but, while reluctant to differ from such an authority, I am still more reluctant to permit his advocacy of the routine application of ligatures in tonsillectomy to go unchallenged.

Experience and observation have demonstrated to me that such a procedure is not only unnecessary but also inadvisable. In the very great majority of tonsillectomies haemostasis occurs rapidly and conclusively without the application of ligatures. Moreover, in those cases where a ligature has been applied granulation tissue forms at the site of the ligature, healing is delayed, and ultimate scarring is more likely. These ill results are doubtless in part due to the inclusion in the ligature of other than purely vascular tissue, an occurrence which even with the greatest care cannot be altogether avoided.

In cases of tonsillectomy by the blunt guillotine the number requiring ligature is extremely small; in tonsillectomy by dissection—a method I reserve for adults and "recurrences"—I find that only about one case in twenty requires a ligature. This low figure is not obtained by any sacrifice of surgical principles, for no patient leaves the table bleeding, but by the occasional exercise of a little patience. In this connexion it may be noted that wool packed in the fossa is a very much more efficient haemostatic agent than the gauze mentioned by Mr. Tilley. If, when the fossae are empty and the pharyngeal reflexes are active, there is no bleeding, one can feel confident that there will be no reactionary haemorrhage.

Routine ligaturing must entail many unnecessary ligatures. Treatment of each case on its merits, with the application of a ligature only when necessary, results in so much speedier convalescence and so much better final results that any other course is to be deprecated.—I am, etc.,

Canterbury, Dec. 29th, 1928. THOMAS A. CLARKE.

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SIR,—I wish to endorse strongly the remarks of Mr. Herbert Tilley in last week's *British Medical Journal* as regards haemorrhage in these operations. As one who also always employs the "dissection" method in private work I thoroughly agree with Mr. Tilley's insistence on the effective control of haemorrhage in the performance of the operation. Children do not bear haemorrhage well, and in those cases in which much loss takes place, either during or after operation, the child's health may be seriously affected for some weeks. No case should be considered finished and allowed to come round from the anaesthetic until both tonsil beds are dry, whether the case be that of an adult or a child; only in this way can post-tonsillar haemorrhage be reduced to a minimum. And though not always necessary in my experience in a child under 12 or 14, ligature of the vessels mentioned by Mr. Tilley is the only sure way of controlling them—occasionally other bleeding points, especially when close to the tongue, may also need ligature. Of course, I am not referring to those worrying cases, fortunately rare, when a general oozing persists or starts after operation, and where no ligature of any special point is of avail. In conclusion, I cordially agree with Mr. Tilley that we should emphasize most strongly the need for careful observation in these cases, and not consider as a light thing "the loss of a little blood."—I am, etc.,

Southsea, Dec. 30th, 1928. C. A. SCOTT RIDOUT.

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## CARDIOSPASM OR ACHALASIA OF THE CARDIA.

SIR,—The controversy between those who support these rival terms has been reopened in your columns by Mr. Greenwood's article in the issue of November 24th, 1928 (p. 932), and the replies of Dr. Hurst and Mr. Rake on December 15th (p. 1110). While disagreeing profoundly with many of Mr. Greenwood's statements and inferences, and while acknowledging that Dr. Hurst has introduced a most valuable method of treatment by means of mercury bougies, I cannot help feeling that neither name is entirely satisfactory. As Dr. Hurst is the originator and the principal exponent of the theory of achalasia of the cardia, I should like to ask him the following questions.

1. How does he explain the fact that the obstruction is not always at the cardia? With a typical history it may be in the middle of the oesophagus, and in one of my cases it varied in position—being at one time near the middle and at another time at the lower end. Would he regard these cases as spasmodic?

2. Does he think the comparison of the cardia with the anal sphincter is a satisfactory one, and would he seriously expect a spasmodic contraction of a sphincter like the cardia, which is so poorly developed that some authorities have even denied its existence, to grip the mercury tube as an anal sphincter in spasm will grip the finger?

3. Does he consider that in cases of achalasia of the cardia there is always a residue of eight inches of food in the oesophagus? Has every eight-inch column of food the same weight, and has every cardia exactly the same resistance to relaxation?

4. If the answers to question 3 are in the affirmative, what happens in the cases occurring in small children? The youngest of my patients was only 4 years old, and an eight-inch column of food would have overflowed into the pharynx.

5. If the cardia relaxes when the column of food exceeds eight inches, why does it close again as soon as the height falls once more to the exact level of eight inches? Once it has relaxed, why does not the relaxation persist until the whole column has fallen through?

I should also like to ask Mr. Rake whether he really meant that the wall of the oesophagus was 4 cm. thick at the upper end in his first case. Incidentally I may mention that the average thickness of the muscle at the cardia in his twenty normal cases slightly exceeds that found in a series of 123 cases measured for me by Drs. Woods and Bratton at the London Hospital, the average in these being just under 0.25 cm.—I am, etc.,

London, W.1, Dec. 31st, 1928. C. C. BEATTY.

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## PAPULAR URTICARIA.

SIR,—I am very pleased to learn that Dr. G. H. Lancashire proposes to admit to hospital one of the patients he supposes to be sensitized to a food protein, and I hope he will have the kindness to inform me should the characteristic lesions of papular urticaria follow the ingestion of the particular protein. I should then be convinced that one of the exciting causes of this peculiar complaint of infants is a food sensitization.—I am, etc.,

Sheffield, Dec. 31st, 1928. RUPERT HALLAM.

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## "THE RIGHT TO PRACTISE."

SIR,—In reply to Dr. A. G. Newell's letter (December 29th, 1928, p. 1197) may I refer him to the words of the Medical Act of 1858, Section 34?

"After the 1st day of January, 1859, the words 'legally qualified medical practitioner' or 'duly qualified medical practitioner,' or any words importing a person recognized by law as a medical practitioner or member of the medical profession, when used in any Act of Parliament, shall be construed to mean a person registered under this Act."

Anyone, therefore, who is not registered under the Act is not a "duly qualified medical practitioner," and has no "right" to practise as such.—I am, etc.,

Hyde, Cheshire, Dec. 29th, 1928. J. GORDON MACQUEEN.

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SIR,—Surely Dr. A. G. Newell has also confused himself about the "rights" of this question. I refer to the concluding sentence of his letter, in which he illustrates the position of a man whose name has been removed from the *Medical Register*, and states, ". . . he still possesses the legal right to practise *provided* his university or other qualifying body has not taken away his degree or diploma." The proviso governing this statement is entirely misleading. Even if every degree or diploma was taken away the man in question would still

be free to practise medicine and/or surgery with impunity. Such is the law as it stands, and it is well that the issue should be clearly stated and understood.—I am, etc.,

Tunbridge Wells, Dec. 31st, 1928. W. E. HEMPSON.

## SECURITY OF TENURE IN PUBLIC POSTS.

SIR,—I have been asked, as the writer of the first letter on the above subject, to make some remarks on the letters that followed. The consequences of insecurity are so widespread that any discussion must traverse regions apparently foreign to the subject. I can only deal at present, therefore, with the general aspects presented.

Readers will have noticed that whereas the two writers who acquiesced in the *status quo* signed their letters, three of the four who criticized it did so anonymously; a course doubtless distasteful, but thought necessary because of insecurity in their posts. One may suppose this feeling stifles in others also that frank expression of opinion so necessary for progress in any field of endeavour. A medical contributor to a contemporary, who abstracted my letter into its columns, stresses this point.

Under the present state of insecurity large bodies of doctors engaged in work of the utmost importance to the community are perforce inarticulate. They cannot unite in defence of their interests or betterment of their position. This is a grave situation which the British Medical Association cannot continue indefinitely to ignore. The importance of their work is known to all. Taking a minor branch mentioned in several of the letters—namely, the asylums, we find there are over 130,000 mental patients in public institutions in England and Wales alone. There are roughly 100 public asylums, with probably 450 doctors employed, of whom say 350 are subordinate and inarticulate. £8,000,000 of public money is spent annually on these asylums, the entire administration of which is deputed to the medical superintendents. Since each superintendent starts as an assistant medical officer, the training, habits of mind, and traditions of the subordinate medical staffs are essential factors in the welfare of the service as well as of their patients. Moreover, from the medical superintendents are chosen the medical members of the Board of Control—the official advisers of the Government in all that concerns the mentally ill of the nation.

"M.B." sees a connexion between insecure tenure and the rather low status of the assistant medical officer. This is a reflection on a devoted body of brethren working under conditions that smother initiative and professional enthusiasm. But there are grounds for his assertion. Again, taking the asylum doctors as a test, we find that the qualifications and records of original work possessed by the average medical superintendent do not compare with those of his "opposite numbers," the specialists of the big general hospitals. British alienism has not brought forth a Lister or a Jenner; if we would meet their compeers we must go to Austria, to France, to Germany, to Italy. It is a disturbing thought that inspires the question "Have we been rearing our young asylum doctors on the correct lines"? Even if we apply the test to the members of the central body itself we find (with one praiseworthy exception) little to suggest eminence. With regret we fail to find the D.P.M. attached to a single name. This, the simplest specialistic qualification in psychiatry, should be compulsory for every doctor in charge of the insane. It corresponds to the D.P.H., compulsory for years past on medical officers of health. Insecurity of tenure and the evils arising from it, cause promising men to avoid these national services. But the State has a claim to the best brains in the profession, and the conditions should be such as will attract them. How sad it is they fell into the hands of petty parochial bodies, and thus lost all co-ordination!

The Association may regard the subject from the standpoint of the material prosperity and comfort of the medical man, or with the more altruistic objective of the national health. In either case it has here the chance of performing a great work by raising the status of these services. As a first step let it take legal advice, and draw up a provisional form of agreement ensuring adequate security of tenure to every pensionable doctor. Then let it enforce this by refusing advertisements from authorities who decline to conform.

The greatest evil of the present position is that secret charges, which he has no means of discovering, and which result in the instant loss of his post and pension, can be made against a doctor. This may occur even if he has served more than the statutory number of years necessary to entitle to a pension. He is removed by "termination of the appointment," which is not "dismissal" in law; thus he can take no steps to defend his good name and professional reputation. This should be made impossible. The known existence of this Cheka-like machinery of repression, even if never used, is harmful alike to management and staff of an institution. It is easy to show that it is antiquated and father to a multitude of evils, and when this is done the case for a move on to a system more in consonance with the spirit of the times and the dignity of our profession is practically completed.—I am, etc.,

Wedmore, Dec. 2nd, 1928. H. C. MCMANUS.

# Universities and Colleges.

## UNIVERSITY OF OXFORD.

THE following candidates have been approved at the examination indicated:

FINAL B.M., B.CH.—(*Medicine, Surgery, and Midwifery*): A. R. Bowtell, S. B. Davis, R. M. J Harper, A. G. Hill, R. G. Macbeth, D. C. Shields, Margaret A. L. Herbertson, Joyce Wright. (*Materia Medica*): P. M. F. Bishop, J. F. Brock, J. M. L. Burtenshaw, E. C. Coaker, W. J. Cotton, R. F. Lomax, R. L. H. Townsend. (*Pathology*): A. H. Bateman, F. Bell, J. F. Brock, J. L. Clapham, A. Guirdham, M. A. Hatt, J. C. Leedham-Green, W. H. McMenemey, J. C. Neely, J. N. O'Reilly, R. S. B. Pearson, B. T. Squires, Anne D. M. Adams, Olive M. Capper-Johnson, Amy C. E. Clarke, Victoria M. Robinson. (*Forensic Medicine and Hygiene*): H. R. J. Donald, J. A. Eddy, R. G. Macbeth, H. E. Mansell, J. C. Neely, J. C. Nicholson, G. P. Roxburgh, W. J. Walter, H. G. Wells, Ruth Sandeman.

## UNIVERSITY OF LONDON.

THE following candidates have been approved at the examination indicated:

M.S.—(*Branch I, Surgery*): R. A. Brews, N. L. B. V. Eckhoff, D. H. MacLeod, O. W. Roberts, J. P. Ross.

## ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following candidates have been approved at the examination indicated:

FINAL FELLOWSHIP EXAMINATION.—J. C. Fouche, N. S. Narasimhan, M. J. Riordan, F. G. Stewart.

## CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examinations indicated:

FINAL EXAMINATION.—D. J. Herrick, J. F. Hynes, J. P. J. MacMahon, E. S. O'Sullivan, J. Ryan, W. J. Walshe.

D.P.H.—J. Molony.

D.P.M.—F. J. Deane, J. M. C. Speer.

## UNIVERSITY OF CAPETOWN.

*Graduation Ceremony.*

AT the December graduation ceremony of the University of Capetown the following were admitted to the degree of Bachelor of Medicine and Bachelor of Surgery (M.B., Ch.B.):

M. J. Cohen, G. J. Conradie, J. C. Downes, S. W. Jaffe, B.A., S. Kahn, B.A., P. Kushlick, L. J. J. Muller, W. H. Opie, D. H. Pfeiffer, R. B. Saunders, B.A., S. Schur, B.A., R. Turner.

## SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have passed in the subjects indicated:

SURGERY.—E. A. Johnstone, E. A. Lipkin, D. M. Nightingale, A. K. Rama Chandra, R. W. Scanlon.

MEDICINE.—W. S. Ghai, D. H. Haler, K. R. Lundeberg, K. G. Milad, T. A. P. Proctor, A. K. Rama Chandra, H. Tenenbaum.

FORENSIC MEDICINE.—W. S. Ghai, D. H. Haler, C. K. McCoan, J. H. McGibbon, K. G. Milad, T. M. White.

MIDWIFERY.—W. D. Glynn-Jones, D. H. Haler, K. G. Milad, B. J. Niall, K. M. Seedat, T. M. White.

The diploma of the Society has been granted to Messrs. W. S Ghai, E. A. Johnstone, W. D. Glynn-Jones, E. A. Lipkin K. R. Lundeberg, A. K. Rama Chandra, K. G. Milad, T. A. P Proctor, H. Tenenbaum

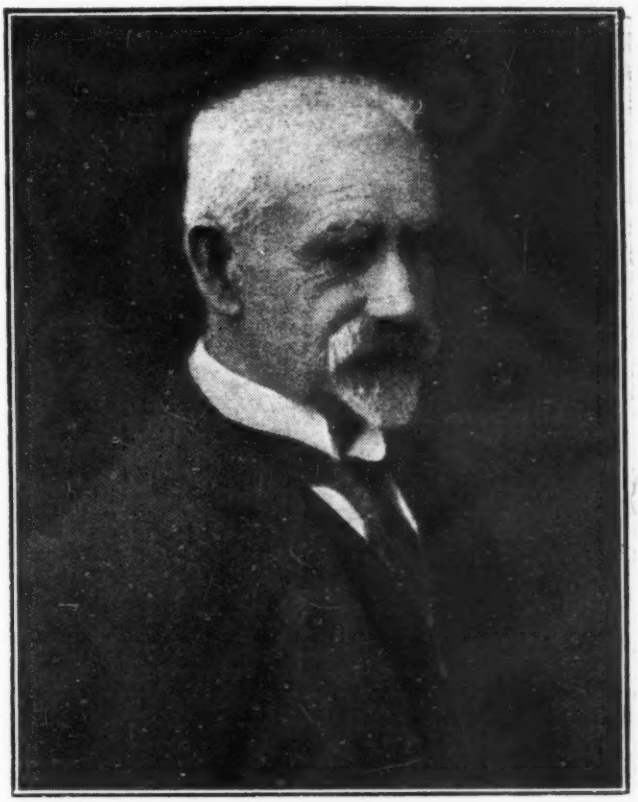
# Obituary.

## WILLIAM THORNBOROUGH HAYWARD, C.M.G., LL.D., M.R.C.S., L.R.C.P.I.,

Consulting Physician to the Adelaide Hospital, and Consulting Medical Officer to the Adelaide Children's Hospital.

We have to record with great regret the death, at the age of 73, of Dr. W. T. Hayward, which took place on December 21st, 1928, at Adelaide, Australia.

William Thornborough Hayward was born at Reading on January 26th, 1854. He received his early education at St. John's College, Hurstpierpoint, proceeding to his medical studies at the Liverpool School of Medicine in 1869, where he became silver medallist in medicine, surgery, and pathology. In 1873, after gaining an exhibition at the Liverpool Royal Infirmary, he became an assistant to a general practitioner, qualifying L.R.C.P.I. and L.M. in 1874. In the following year, having in the interim made two visits to South America as ship surgeon, he became house-surgeon to Mr. Bickersteth, one of the earliest disciples of Lister, and was able to observe the development of aseptic surgery. During his term of office he assisted in the application of Thomas's splints, the first used in any general hospital, and became an enthusiastic exponent of the value of this surgical appliance. Indeed, a few months later, when he was appointed house-surgeon to the Liverpool Children's Hospital, he was successful in introducing this method of treatment for cases of hip and knee disease. Some years later, in 1883, he exhibited Thomas's splints at a meeting of the South Australian Branch of the British Medical Association, probably the first occasion on which the subject had been brought before a medical society in Australia.



DR. WILLIAM T. HAYWARD.

In 1877 Hayward again served as ship surgeon, and arriving at Adelaide in 1878 he settled down in private practice. He was elected honorary physician to the Adelaide Hospital in 1885, and continued to hold this appointment until 1914, when he was appointed honorary consulting physician. Between the years 1889 and 1899 he was honorary medical officer to the Adelaide Children's Hospital, being appointed honorary consulting medical officer on his retirement. Eight years after his arrival in Australia he was appointed lecturer in clinical medicine at Adelaide University, holding this office till 1914, and lecturer in materia medica and therapeutics from 1888 to 1920. He was appointed a member of the council of Adelaide University in 1899, a position he held until 1924. He represented the university on the board of management of Adelaide Hospital.

During the great war he was on active service with the Australian Forces, being gazetted major in the Army Medical Corps in 1915, lieutenant-colonel later in the same year, and colonel in 1918. He was employed on headquarters staff until 1915, when he was appointed officer commanding 1st A.A.H. Harefield. In September, 1917, he was transferred to Boulogne, where he was appointed senior physician to the 2nd Australian General Hospital, a position he held till 1918, when he became senior medical officer of the review board. He was mentioned in dispatches in 1917, and a year later received the honour of C.M.G.

Dr. Hayward was an active and enthusiastic member of the British Medical Association, and in 1879 he was in large measure responsible for the formation of the South Australian Branch, the first Branch of the Association in Australia. He became its vice-president in 1884, and was elected president in 1885. From that time onwards he held a number of important offices, representing his Branch on the Australasian Federal Committee from 1911 to 1922, and serving as a member of council for twenty-seven years. In 1912 he was elected first chairman of the Federal Committee, holding this office till 1922, and from 1914 to 1918 he was a member of Council in London for South Australia and Victoria, being elected a vice-president of the Association in 1914. The Federal Committee of the British Medical Association, Australia, presented him in 1914 with the gold medal of honour "for distinguished service." He was the first recipient of this medal in Australia. In 1914, on the occasion of the British Medical Association's Annual Meeting at Aberdeen, the University conferred on him the honorary degree of LL.D. This recognition of Dr. Hayward's merits gave great pleasure to his friends, and he himself took a legitimate pride in what he regarded as an honour not merely to him as an individual but to Australian medicine. In the same year he became an honorary LL.D. of the University of Adelaide.

As a physician Dr. Hayward held strong views, which he was always ready to convey with courage and conviction. In 1898 he brought the subject of pleural empyema before the profession in Australia. He strongly advocated the view that practically all cases of this disease in children were due to the pneumococcus, the so-called pus being broken-down fibrinous exudate which could be evacuated by rib resection. He recorded cases which showed that by this means drainage could be completed in twenty-four hours. He was an enthusiastic exponent of venesection in selected cases, and did a great deal to introduce its use to the notice of his colleagues in Australia. Convinced that the overfeeding of invalids was the cause of many troubles usually attributed to the disease from which they were suffering, he made a practice of greatly restricting the diet of his patients, of even forbidding food at certain periods, and gained thereby the name of "the starving-doctor." He believed that alcohol had been given far too important a place in therapeutics, and in the last decade of his practice at Adelaide Hospital he hardly ever prescribed it. His bedside teaching and lectures on therapeutics had a considerable influence in reducing the prescribing of alcohol in Australia. He was the author of a number of clinical papers in the *Australian Medical Gazette*.

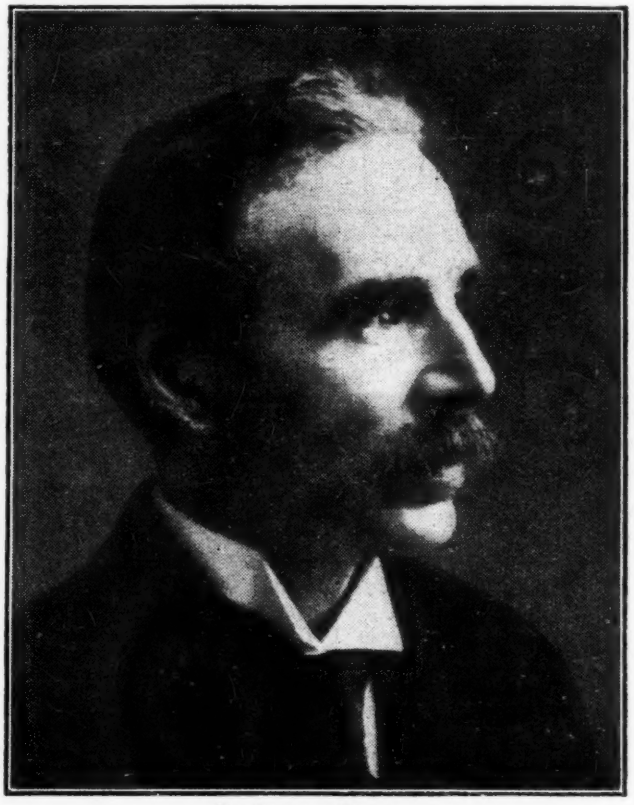
During his stay in England Dr. Hayward made many personal friends, who will feel his loss keenly. By his death Australia has lost a public-spirited citizen and a fine physician and teacher, and the British Medical Association a devoted worker and a loyal colleague.

## DAWSON TURNER, M.D., F.R.C.P.ED.,

Honorary Consulting Physician in Radiology, Royal Infirmary, Edinburgh.

WE have to announce with deep regret the death of Dr. Dawson Turner, one of the pioneers in radiology in Edinburgh, which occurred on December 25th, 1928, at Godalming, Surrey, where he had been living since his retirement a few years ago.

Dawson Fyers Duckworth Turner was born at Liverpool in 1857, and after graduating B.A. at Dalhousie University, Canada, went, in 1884, to Edinburgh to study medicine. He graduated M.B., C.M. with honours in 1888, proceeding M.D. in 1890. In the same year he obtained the diploma M.R.C.P.Ed., being admitted to the Fellowship in 1891, and became also M.R.C.P.Lond. During the summer of 1889 he acted as resident physician in the Royal Infirmary with Sir James Affleck, having as fellow residents Dr. R. A. Fleming, Professor Robert Muir, the late Professor James Ritchie, and Mr. Alexander Miles, and was later house-physician in the Royal Maternity and Simpson Memorial Hospital. After a period spent in visiting foreign schools of medicine, he turned his attention to lecturing on physics in Surgeons' Hall, Edinburgh, being also clinical tutor in the extramural class of clinical medicine. Shortly after he had begun to lecture upon physics the *x* rays were discovered by Roentgen in 1895, and Dawson Turner was one of the first to recognize their possibilities in medicine. A primitive *x*-ray installation, which was the first in Edinburgh, was set up in his house at George Square, and attracted much attention when he demonstrated to his friends and colleagues its properties of showing up bones and foreign bodies in the tissues. When, a few years later, radium was discovered, he soon secured a specimen, to which he added from time to time. For many years this was the only supply of radium in Edinburgh, and Dr. Turner generously placed it at the disposal of the Royal Infirmary for the treatment of patients until the managers secured supplies for the institution. It was natural that when an *x*-ray department was installed in the Infirmary it should be placed under his charge, and although his health determined him a few years later to abandon the management of the radiological department, he retained his connexion with it as honorary consulting physician in radiology to the Infirmary, and for many years continued in charge of the treatment by means of radium. In common with many of the early workers in radio-therapeutics, Dr. Turner suffered considerable deterioration in general health from the ill effect of long exposure to the rays, which was in the early days of radiology little understood. He lost successively three fingers and an eye from this cause, and the effect of these losses on his general health led to a considerable curtailment of his activities.



DR. DAWSON TURNER.

In addition to his lectureship in physics, Dr. Turner acted as examiner in physics in the Royal College of Physicians of Edinburgh, and additional examiner in physics in Edinburgh University, and he was for a time vice-president of the Roentgen Society. His *Manual of Practical Medical Electricity* was a well-known textbook on this subject for many years, and went into a fourth edition, while his smaller work *Radium, its Physics and Therapeutics* was also widely used. He contributed many papers, mostly on physical subjects related to medicine, to various medical journals, such as an article on "The haemorenal salt index and deficiency of the kidney," published in the *Transactions of the British Association* in 1906, and an article on "Electrolysis in medicine and surgery" contributed to the *Edinburgh Medical Journal* in 1908. In that year, at the Annual Meeting of the British Medical Association at Sheffield, he was vice-president of the Electrical Section.

Apart from the affairs of his profession, Dr. Turner had many interests. He was an accomplished linguist, had travelled much, and possessed wide general culture. He was one of the earliest men in the medical profession to take up motoring in the closing years of last century, and enthusiastically recommended this means of progression as a method of applying open-air treatment in cases of phthisis. Although, for reasons of health, he had retired from medical work in Edinburgh and had sought a home in the South of England, he maintained communication with many friends in Edinburgh, by whom, as well as by the public bodies with which he was connected, his loss will be keenly felt. He is survived by a widow.

Dr. JOHN W. L. SPENCE, radiologist, Royal Edinburgh Hospital for Sick Children and Deaconess Hospital, writes:

Nearly thirty years have passed since I was asked by Dawson Turner to assist him in the newly organized *X*-Ray Department of the Edinburgh Infirmary. It then consisted of two rooms, well below the street level, and with a precipitous wooden stairway leading to it. From the very start Turner displayed the keen interest and masterly powers of arrangement which characterized all he did. He did much for radiology and later in the domain of radium. He was gifted with excellent observation and forethought. To his pioneer labours and wide outlook are largely due the present well-equipped radiological department of our Infirmary. Possessing a retiring and reserved disposition he did not make friends readily, but, hidden by this reserve, one found a staunch and loyal fellow worker. He was the soul of honour and carried with him an old-world courtesy—rare in his generation. His achievements have been an impetus to the progress of medicine, and his name will endure on the scroll of time. Those who knew him best will cherish the memory of an indefatigable student and worker, untarnished by selfishness and petty jealousy.

His researches, at a time when the evil effects of *x* rays were unknown, led to years of suffering, which undermined his strength and in the end killed him. Through it all he bore his sorrows and losses with a great fortitude and courage. Of Dawson Turner it may well be said, in the heroic endeavour to save human life, he serves God best who most nobly serves humanity.

[The photograph reproduced above is by the Central Press.]

## PETER BROOME GILES, C.B., F.R.C.S.Ed.,

COLONEL A.M.S.(T.).

WE regret to announce the death on December 19th, 1928, at Folkestone, after a long illness, of Colonel Peter Broome Giles, who was prominently associated with the medical service of the old Volunteers, and later with that of the Territorial Force, and was long recognized as an authority on ambulance work.

He was born on April 5th, 1850, the eldest son of Peter Broome Giles of Staunton-on-Wye. His school days were passed at St. Catherine's Hermitage, Bath, kept by William Horner, son of the mathematician. From there he went to study medicine at University College, London, and obtained the M.R.C.S.Eng. diploma in 1871, the L.R.C.P.Ed. in 1872, and the L.S.A. in 1876. In 1897 he became F.R.C.S.Ed. After holding a succession of house appointments at University College Hospital he returned to the West of England, combining the work of a general practitioner with active participation in the Volunteer and ambulance movements and the enjoyment of country sports. He was a good shot, a keen fisherman, and for a number of seasons acted as Master of the Herefordshire Staghounds.

After many years of practice at Brobury, near Hereford, Broome Giles moved to Buckinghamshire, where he kept up his interest in all sides of public life. Having served on the magistrates' bench in Herefordshire, he was made a justice of the peace for the county of Buckingham, and in later life, after retirement from active medical work, he became justice of the peace for Folkestone. In 1906 he was elected to the Buckingham County Council, and served in the following year as high sheriff. Before leaving Wye-side he rose to be brigade-surgeon lieutenant-colonel of the 1st Herefordshire R.V. and Welsh Border Volunteer Infantry Brigade, and surgeon lieutenant-colonel in the Army Medical Reserve. He was made county director of the City of London Branch of the British Red Cross Society in 1905, and on the formation of the Territorial Force he became A.D.M.S. of the 1st London Division, with the rank of colonel. He received the Volunteer and Territorial decorations, and in 1911 was created C.B. The war gave him opportunities for employment in further army medical work. He was appointed commandant of the military convalescent hospital at Alnwick in 1915, and of that at Ashton-in-Makerfield in 1917, and served later upon a Pensions Board.

Colonel Broome Giles was an old member of the British Medical Association, and held office as chairman of the Aylesbury Division in 1905. In the following year he became a member of the Volunteer Medical Service Committee appointed by the Council to consider the question of reorganization; he attended the meetings regularly and took an active part in the committee's work until the issue of its report in 1907. He was the author of several books on the training of stretcher-bearers, and of papers on ambulance work and the organization of military medical units; and from time to time letters from his pen appeared in our columns. All that he wrote was in keeping with his vigorous open-air personality.

Colonel R. R. SLEMAN, M.D., writes: Peter Broome Giles commenced his military career in the ranks of the Artists' Rifles; when qualified he took a commission as surgeon in the Herefordshire Rifles, later being promoted to the rank of brigade surgeon in the Welsh Border Brigade. In this capacity he solved the difficult problem of the formation of Volunteer brigade bearer companies—namely, he enrolled the Welsh Border bearer company on the strength of one battalion. He rendered great assistance to the Army Medical Department before the formation of the Territorial Force, during which time, as commandant of the Volunteer Ambulance School of Instruction, he had had great experience in the teaching of Volunteer medical officers, and the regimental stretcher-bearers of the London district. When he was commandant of the Military Convalescent Hospital at Ashton-in-Makerfield during the great war he was severely injured in an air raid. A man of good physique, always enthusiastic and optimistic, he was much liked, and was a good judge of man or horse.

## F. W. TUNNICLIFFE, M.D., M.R.C.P.,

Physician, King's College Hospital, London; Lecturer on Therapeutics, King's College Hospital Medical School.

WE record with regret the death of Dr. Francis Whittaker Tunnicliffe, which occurred at his residence in Harley Street, on December 15th, 1928, at the age of 62. He was the youngest son of the late Frederick Warner Tunnicliffe, and was born at Blana, Eccleshall, Staffordshire. He received his medical education at St. Bartholomew's Hospital, where, after serving as house-surgeon, he came greatly under the influence of Sir Lauder Brunton. Hence his interest in the subject of pharmacology. After leaving St. Bartholomew's Hospital he studied in Vienna and Prague, and later was appointed to a position at King's College, where he was for some time professor of materia medica and pharmacology. He became physician to King's College Hospital, and lectured on therapeutics and the practice of medicine at the medical school.

Dr. Tunnicliffe was appointed a member of the departmental committee on preservatives and colouring matter in food; he examined in materia medica at the Royal College of Physicians; he was a member of the Medico-Legal Society, and a fellow of the Royal Society of Medicine. At one time he was physician to the North London Hospital for Diseases of the Chest. His contributions to medical literature consisted of papers on the physiology and pathology of the respiratory, circulatory, and digestive organs; and ranged from an article, with Sir Lauder Brunton, on the effect of massage on the circulation to observations on the effects produced in the human organism by such substances as piperidine, boric acid, formic aldehyde, and phosphorus compounds. Dr. Tunnicliffe served on the former Therapeutic Committee of the British Medical Association, and was secretary of the Section of Pharmacology at the Annual Meeting at Manchester in 1902. Owing to his devotion to a subject which, however useful, is not generally considered attractive by medical men, he was not perhaps as widely known as many consultants of his standing. But in that subject he had achieved for himself a position of prominence.

## PETER MAURY DEAS, M.B., M.S.,

Formerly Medical Superintendent, Wonford House Hospital, Exeter.

WE regret to have to record the death of Dr. P. M. Deas, which occurred at his home at Budleigh Salterton, Devon, on December 15th, 1928, at the age of 86. He had spent the larger part of his active life in mental hospital work, and at one time took a prominent part in the affairs of the British Medical Association, of which he was a member for over forty years.

Peter Maury Deas received his medical education in the University of Edinburgh and in Paris. In 1863 he obtained the diploma L.R.C.S.Ed., and graduated M.B. and M.S.Lond. in the years 1865 and 1866. In the course of his undergraduate career he won several scholarships and exhibitions, and a gold medal in forensic medicine at the University of London. He was for some time assistant physician at the Royal Edinburgh Asylum, and was later medical superintendent of the Cheshire County Asylum, ultimately being appointed medical superintendent of the Wonford House Hospital for the Insane at Exeter in succession to Dr. Sutherland Rees Philipps, who resigned the post on his appointment as medical superintendent at Virginia Water. Dr. Deas held office at Wonford House for twenty-five years. When he went there the establishment was still seriously hampered by a large debt, which had been incurred to move the hospital from its first situation in the lower part of the city and to build a new establishment on the present healthy site. He brought the institution safely throughout these difficulties, and enabled it to buy much of the surrounding land, which, with the present extension of suburban building in Exeter, is of great value. The most notable feature of his tenure of office was the high administrative capacity which he exhibited. The minutes show that he really reorganized the institution, and both he and Mrs. Deas displayed the greatest energy in the administration and in looking after the comfort of the inmates. He was the author of a number of contributions to medical journals on subjects

relating to insanity and lunacy legislation, and his opinion was much sought for, not only in Crown cases, but also as a consultant in the south-west of England.

In the British Medical Association he obtained a leading place, both on the scientific side and in its general work. He was honorary secretary of the South-Western Branch, and as such served as a member of the Central Council from 1888 to 1892—under the old constitution—and he was again a member of the Council from 1898 to 1905, so that his experience covered a time of important development in the history of the Association. He was for some years a member of the Parliamentary Bills Committee and of a joint committee formed in conjunction with the Medico-Psychological Association to consider legislation on lunacy. At the Annual Meeting of the British Medical Association at Bournemouth in 1891 he was president of the Section of Neurology and Psychological Medicine. At the time of the Exeter meeting of the Association, in 1907, it was much discussed whether he or another candidate should be put forward as President; eventually he was elected president of the South-Western Branch, and threw himself unreservedly into the work of preparing for the meeting. The very successful reception by the Branch owed its success greatly to his efforts, and a most delightful garden party was given at Wonford House under his aegis. The meeting owed much to his efforts.

Dr. Deas was greatly interested in the drama, and was for several years a director of the Exeter Theatre Royal. No mean amateur actor, he belonged to the Exeter Dramatic Society, and, in addition, he arranged the small plays at Wonford House which were, during his time there, so greatly appreciated by the patients. Possessed, moreover, of a fine high tenor voice, he was much sought after at private musical entertainments. He was an earnest Freemason, and was a past master of the St. George's Lodge, Exeter, No. 112, and also a past grand warden of the province of Devonshire.

## THE LATE SIR HECTOR CAMERON.

PROFESSOR GREY TURNER (Newcastle-upon-Tyne) writes:

My first introduction to the late Sir Hector Cameron was at the time he presided over the Section of Surgery at the Annual Meeting of the British Medical Association in Toronto in 1906. At that meeting this Section was a very large one, and included a very considerable number of Canadian and American visitors. With so many eager to speak, and to continue speaking, in spite of the rules governing meetings of the Association, it was not easy to control the more ardent. I shall never forget the urbane and tactful way in which Sir Hector managed to give everybody a fair hearing, while at the same time adhering strictly to the regulations. At one of the sessions William Mayo had not nearly finished his paper when the time allotted expired, and I wondered how Sir Hector would deal with the situation. There was no difficulty; the chairman politely stopped the speaker for a moment and said that his time was up, and then, addressing the meeting, he said that doubtless it would be the wish of all present that so distinguished a surgeon as Dr. Mayo should be allowed to finish his communication. Of course an applause of approval resulted, Sir Hector sat down, and the speaker finished in comfort. Another gentlemen from further south was addressing the meeting rather diffusely, and was very properly called to order, but did not sit down before saying that it was the first time he had enjoyed the honour of addressing the British Medical Association, and he was very sorry that the Marquess of Queensberry rules had been applied on that occasion! No one appreciated this sally better than Sir Hector. I think it was a surprise to many of our visitors on the other side of the Atlantic to find a meeting of so great a size conducted in so businesslike a manner, and I subsequently heard many favourable comments with regard to it from my American friends. In the afternoon I met Sir Hector at some social function, and I vividly remember how appreciatively he spoke of a communication which I had made to the Section in the morning.

When Sir Hector Cameron came down to Newcastle to address the Glasgow Graduates' Association he spoke on "The survival of disease germs in the body"; his discourse was delightful, as it dealt with the subject entirely from a clinical point of view, and was profusely illustrated from his own very large experience. I doubt if I have ever enjoyed any similar address more thoroughly, and the lessons which he drove home have been of great value to me ever since. I remember on that occasion that he appeared to be of considerable age, and it impressed me very much to see him the next morning keenly watching operations at the hands of Professor Rutherford Morison. He was greatly attracted by some china balls which the professor used to have attached to his mops to prevent them being overlooked in abdominal cases, and I know that he went away with a supply for trial in his own clinic, which I thought showed a very receptive mind.

After that the war intervened, and, though I heard of his wonderful activities at that time, I did not see him again until I was acting as external examiner at Sheffield in 1921. Sir Hector was one of the official inspectors appointed by the General Medical Council, and I remember that he spent practically the whole day with the examiners, and often at my elbow, and I certainly felt that I was going through a severe ordeal. He kept careful notes of questions and answers, and often made pertinent remarks on the examination. I cannot imagine anybody carrying out this duty more thoroughly or more conscientiously than Sir Hector, though he was then in his seventy-eighth year. I also vividly recollect that in the evening our Sheffield colleagues invited us to a very pleasant dinner at their club, and that Sir Hector was the life and soul of the party, entertaining us with an account of his recent experiences as an inspector in Ireland during the time of the terror, and with other reminiscences largely concerning his association with Lister.

As an example of his thoughtfulness, I may mention that he took the trouble to send me a charming letter of congratulation when I was appointed professor of surgery in the University of Durham. Among my treasured possessions is another beautifully written letter which I received from him only last year in connexion with the Lister centenary celebrations, and amplifying a statement made in his interesting little brochure which was published at that time. This letter is a model of lucidity and accuracy, despite his eighty-three and a half years, and is written in a perfectly legible hand which would put most medical men to shame.

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DR. DONALD GRAHAM CAMPBELL, who died in Edinburgh on December 14th, 1928, had for thirty years been a well-known practitioner in Elgin, but owing to failing health he had recently retired from practice. He received his medical education at Edinburgh University, graduating M.B., C.M. in 1892. Subsequently he acted for a time as assistant medical officer of the Crichton Royal Institute at Dumfries, and shortly afterwards commenced practice at Elgin, where he took a special interest in surgery, and was visiting surgeon to Gray's Hospital. He was also medical officer for the district lunatic asylum at Elgin. He participated actively in the affairs of his profession, being a member of the Medico-Psychological Association and a keen worker in the British Medical Association. In 1923–24 he was chairman of the Banff, Elgin, and Nairn Division, and in 1925 he was elected president of the Northern Counties of Scotland Branch. For many years he took a keen interest in the Territorial Army, and held the rank of lieutenant-colonel in the R.A.M.C.; during the war he was in command of the 139th Field Ambulance with the British Expeditionary Force in France, where he saw much hard service. On his return to Elgin he interested himself greatly in the formation of the local branch of the British Legion, whose president he was from its inception. Dr. Campbell had many other interests outside the routine of his professional work, and was a Fellow of the Society of Antiquaries of Scotland. His death will be mourned by a wide circle of friends in the North of Scotland.

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DR. WILLIAM PINCK, who died in London on December 24th, at the age of 79, retired a number of years ago, after spending the greater part of his life in practice in the Rochdale district. He received his medical education at Glasgow and graduated M.B., C.M. in 1873, obtaining the diplomas L.R.C.S.Ed. and L.M. in the same year. For some time he was associated as an assistant with Lord Lister and also with Professor Gardiner. Subsequently he commenced practice in Lancashire, and for about forty years was medical officer to the Dearnley Hospital at Rochdale. During the war he held a commission in the R.A.M.C., being stationed at Barrow-in-Furness and at Seaforth, near Liverpool. He was for many years a member of the British Medical Association. Since his retirement Dr. Pinck had lived at Redmire, Yorkshire, and Seaton, Devonshire, but removed recently to London. He is survived by his widow and four daughters by a previous marriage.

# Medical News.

THE Fellowship of Medicine and Post-Graduate Medical Association announces that on Friday, January 11th, at 8.30 p.m., Mr. Lindsay Rea will give a demonstration on the fundus oculi, at the West End Hospital for Nervous Diseases, Gloucester Gate, Regent's Park. This demonstration, which is especially suitable for candidates for the M.R.C.P. examination, is free, but is limited to twelve persons. Application for attendance should be made to the Fellowship of Medicine. Telephone: Mayfair 2236. From January 14th to 25th there will be an intensive course at the National Hospital for Diseases of the Heart; as the entry is limited to twenty, early application is desirable. Opening on the same date, and extending to January 26th, an all-day course will be given at the Queen's Hospital for Children. The Prince of Wales's General Hospital staff will give an intensive course in medicine, surgery, and the specialties, from January 28th to February 9th, with daily sessions from 10.30 a.m. to 5.30 p.m. A series of lecture-demonstrations in psychological medicine will be given on Tuesdays and Saturdays at 11 a.m., from January 29th to February 23rd, at the Bethlem Royal Hospital. Copies of syllabuses relating to the above courses, and information regarding the general course arranged by the Fellowship of Medicine, may be obtained from the secretary, 1, Wimpole Street, W.1.

A CLINICAL afternoon, devoted to diseases of the alimentary system, will be held at the East London Hospital for Children, Glamis Road, Shadwell, E., on Wednesday next, January 9th, at 4 p.m. Medical practitioners are cordially invited. Tea will be served at 3.45.

A COURSE of post-graduate lectures on the early detection and prevention of defects and disease in young children will be given on Mondays, from 6.30 to 7.30 p.m., at the Infants Hospital, Vincent Square, from January 7th to March 11th. The course is intended for health visitors, nurses, midwives, and superintendents of infant welfare centres. Further information may be obtained from the honorary secretary of the National Association for the Prevention of Infant Mortality, 117, Piccadilly, W.1.

A SERIES of three illustrated talks on historic London will be given on behalf of King Edward's Hospital Fund, beginning on January 29th, on Tuesdays, at 5.30 p.m., in the Great Hall of Westminster School. The first of the series, by Mr. Lawrence E. Tanner, secretary of H.M.'s Royal Almonry, is entitled "The treasures of Westminster"; the second, on February 5th, will be given by Mr. Walter Bell on "The Great Fire of London"; and the third, on February 12th, will be given by Mr. R. E. M. Wheeler, D.Litt., keeper and secretary of the London Museum, on "The beginning of London." Tickets, price 5s. for reserved, and 2s. 6d. for unreserved seats, may be obtained from the secretary of the Fund, 7, Walbrook, E.C.4. It is also announced that the illustrated lectures on the work of the London voluntary hospitals, under the auspices of the Fund, will be continued during the Easter term. The lectures are being given by doctors and others experienced in hospital work, and describe graphically many new methods of diagnosis and treatment.

AT the next meeting of the Royal Sanitary Institute at 90, Buckingham Palace Road, S.W., on Tuesday, January 8th, a discussion on "Cleanliness: Is it the basis of health?" will be opened by Professor A. Bostock Hill, M.D., chairman of the council. The chair will be taken at 5.30 p.m. by The Right Rev. Bishop Russell Wakefield.

THE next congress of the Royal Institute of Public Health will be held, on the invitation of the Canton, the Municipality, and the University of Zürich, in that city at Whitsuntide, under the presidency of Lord Meston. Delegates are being invited from a number of countries, and, while English will be the language of the congress, the proceedings will be of an international character. The first meeting will be held on Wednesday, May 15th, and the congress will end on Monday, May 20th. Seven sections have been arranged, the subjects covering many aspects of public health, from "State medicine and municipal and social hygiene," to "Climatology and sports hygiene" and "Veterinary medicine and meat hygiene." Other matters to be discussed include industrial diseases, child welfare and school hygiene, women and public health, tuberculosis, and pathology, bacteriology, and biochemistry. Full information regarding the congress may be obtained from the honorary secretaries of the Institute, 37, Russell Square, W.C.1.

THE first annual report of the Water Pollution Research Board, which was established under the Department of Scientific and Industrial Research in June, 1927, has now been published, and may be obtained from H.M. Stationery Office (price 6d. net). Mr. H. T. Calvert, D.Sc., chemical inspector of the Ministry of Health, has been appointed part-time director of research to the Board, and it is intended that its work should be closely co-ordinated with that of the Joint Advisory Committee on River Pollution, established by the Ministers of Health and of Agriculture and Fisheries, to deal with the legislative and administrative aspects of the question. Reference to the first report of the Joint Committee was made in our issue of September 8th (p. 473) and October 6th (p. 630). The Research Board, on its establishment, commenced its task by the collection of scientific and technical information bearing upon water supply and the disposal of polluting liquid, and has undertaken the preparation of a monthly summary of relevant current literature, which is being circulated among interested official and scientific bodies. The issue of reports on special investigations is also contemplated as results become available. Steps have been taken to co-ordinate research work already in progress in Great Britain, and negotiations are being carried on with the object of arranging for a survey of the River Tees. It is believed that a general biological and chemical survey of such a typical polluted river from source to mouth will furnish information of great value and of general application. Research work under the aegis of the Board has been arranged for in connexion with certain aspects of water supply, with the activated sludge method of sewage disposal, and with the disposal of the effluent from beet-sugar factories.

THE ninth annual report of the Walter and Eliza Hall Institute of Research in Pathology and Medicine at Melbourne states that for the first time its value has been practically recognized by the Commonwealth Government, which made a grant of £2,500 for researches conducted on behalf of the Department of Health and appointed the director of the institute, Dr. C. H. Kellaway, chairman of the Bundaberg inquiry; an account of the experimental work performed at the institute in this connexion is given in the report. On the bacteriological side attention has been given mainly to research on the pathogenic staphylococci, and preparations have been made for some studies on anterior poliomyelitis for the Commonwealth Government. A paper has been published on the treatment of puerperal sepsis based to some extent on investigations at the institute. In the biochemical department an exhaustive study is being made of Australian venomous snakes; arrangements have been made to co-operate with the Commonwealth serum laboratories in the production of antivenins for two of the most lethal varieties. Research on hydatid disease has been continued, and among other subjects dealt with have been the diagnosis of bilharzia, the relation of cancer and tuberculosis, tuberculous disease of the hip-joint, and the pathology of pyorrhoea.

AT the December meeting of the London Association of Medical Women's Federation, Miss Frances Huxley presiding, Dr. Mabel Ramsay discussed the benefit of the National Health Insurance Act to the insured person and to the doctor. She expressed the opinion that after fifteen years' working this Act had benefited both the insured person and the medical practitioner. Dr. Ramsay, who had been connected with the administration of the Act in many capacities since its inception, said that in national health insurance there was an absolutely equality of treatment as between medical men and medical women. Every registered practitioner had the right to be on the panel list. To-day the number of women doctors on the panel was a little over 400, and Dr. Ramsay hoped that the woman practitioner would take her full share in a social service which was of such benefit to the wage-earner.

THE National Baby Week Council at its last meeting passed a resolution expressing apprehension at the proposals at present before Parliament to substitute "block" for "percentage" grants in support of the maternity and child welfare service.

THE late Sir Charles Sissmore Tomes, F.R.S., F.R.C.S., has left estate valued at £208,899, with net personality £206,773. In the event of his daughter leaving no issue, he bequeathed £2,000 to the Royal College of Surgeons of England for the foundation of a research fellowship in odontology in the widest sense of the word, or in augmentation of the Sir John Tomes prize, as the Council of the College may see fit.

MR. ROBERT OLLERENSHAW, clinical lecturer in orthopaedic surgery, Manchester University, and orthopaedic surgeon to the Royal Manchester Children's Hospital, has been elected a member of the French Orthopaedic Association.

DR. B. WILFRED THOMAS of Welwyn has, on his retirement from practice, been presented by his friends and patients with a cheque for two hundred guineas; among the subscribers is H.R.H. the Duchess of York, at whose birth Dr. Thomas was in attendance.

# Letters, Notes, and Answers.

All communications in regard to editorial business should be addressed to ***The EDITOR, British Medical Journal, British Medical Association House, Tavistock Square, W.C.1.***

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The ***TELEPHONE NUMBERS*** of the British Medical Association and the *British Medical Journal* are *MUSEUM 9861, 9862, 9863,* and *9864* (internal exchange, four lines).

The ***TELEGRAPHIC ADDRESSES*** are:
EDITOR of the *British Medical Journal, Aitiology Westcent, London.*
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## QUERIES AND ANSWERS.

### DRY SKIN

DR. E. C. MUDIE (Glasgow) writes: In reply to "H. M. C." (December 15th, 1928, p. 1120) may I suggest that, in addition to the administration of thyroid extract (or a mixed gland preparation), he should prescribe general tonic treatment, together with local erythema doses of the quartz mercury vapour lamp? In my own practice the Jesionek, with the quadrilateral reflector, is used for the body bath at three to five feet, while the Kromayer is most useful for the localizing of treatment in which a third degree erythema should be produced. I generally give treatment thrice weekly at first, gradually diminishing the frequency to one a week.

### PTYALISM IN PARALYSIS AGITANS.

DR. E. J. JENKINS (Hunstanton) writes: I should be grateful if any of your readers could suggest a way of relieving excessive salivation in a man of 60, who is suffering from paralysis agitans. The saliva runs down his chin continuously, and is a source of much irritation. It is possible that some kind of pastille, sucked in between his meals, might relieve this annoyance, but I should like to hear first if anyone else has successfully treated this local condition *without interfering with the normal flow required for meals.*

### TREATMENT OF MEMBRANOUS COLITIS.

DR. G. WILLETT (Keynsham) writes: In answer to "Country Doctor's" query as to the treatment of membranous colitis (December 29th, 1928, p. 1202), may I quote my experience of a similar case. I was reading up its literature and was much struck by this sentence—"When in doubt use your microscope, and make certain you are not dealing with a dysentery." I took the hint, and, finding the *Amoeba hystolytica*, was fortunate enough to bring about a rapid recovery by using emetine hypodermically, followed by a short course of pills (salol covered) of emetine-bismuth-iodide 3 grains daily for twelve days.

### MUSCULAR CRAMPS IN ARTHRITIS.

"ALPHA" writes: A married woman, aged 76, who is a victim of arthritis, is much troubled by muscular cramps at night. She was quite free during an attack of lobar pneumonia and for some weeks after. Can anyone suggest a remedy, or report the results given by luminal in such a case?

### INCOME TAX.

*Appointment and Locumtenent Expenses.*

"P. L." holds a public appointment on condition that absence from any cause other than her own illness or the statutory holidays shall be provided for by the engagement of a locumtenent at our correspondent's own expense. The inspector of taxes objects to the deduction of such expenses incurred during the serious illness of "P. L.'s" father.

*** The inspector appears to be technically correct. The expenses which can be deducted are those incurred wholly, exclusively, and necessarily in the performance of the duties of the office. The expenses in question were undeniably incurred in order that for the period concerned "P. L." might be free from the performance of her duties. The alternative contention is that the contract between "P. L" and the local authority was for the performance of certain work by herself or another, and that as it is open to her to do the work or find a substitute at her own option the expense incurred by the latter method is properly allowable. We fear, however, that the former view is sounder. With regard to the subscriptions paid, the amounts can be deducted as expenses, provided that membership of the societies or associations concerned is a condition of employment under the agreement with the local authority.

## LETTERS, NOTES, ETC.

### MIRROR-WRITING.

DR. A. A. E. NEWTH (Attenborough) writes: Referring to the subject of mirror-writing, your readers may be interested to know that a year or two ago I met an officer in the Royal Engineers who possessed the following accomplishments. With his right hand he wrote ordinary characteristic script; with his left hand he produced, equally easily, mirror-writing, which, on examination before a looking-glass, was found to resemble closely the forward writing of the right hand, so that one would have no hesitation in saying that the two were written by the same person. Writing backwards with the right hand, or forward with the left, was as laborious to him as it would be to a normal individual. He could read the mirror-writing of his left hand no more easily than a normal person, and so found difficulty in correcting what he had written, although he could feel in an instant when he made an obvious mistake. In sketching the human face he was accustomed to draw with his right hand when the subject was looking to the left, and with his left hand when he or she was looking to the right. He was right-handed in some games, left-handed in others. He had discovered his faculty for mirror-writing when, as a small boy, he had injured his right wrist, and so had to write temporarily with his left hand. He developed his newly discovered accomplishment in order to amuse his fellows. Later in life, having to sit for an examination, he had the misfortune to injure his right hand again, and he obtained permission to write his papers with his left hand—mirror-writing.

DR. EVA MCCALL (London, W.1) writes: Two cases of mirror-writing recently came under my notice in the infant department of a large L.C.C. elementary school. The children were between the ages of 5 and 6, and neither showed any evidence of mental deficiency. One case was obstinate, and all efforts on the part of the teacher to correct the mirror-writing (which was typical and extended to numerals) were in vain. The child, however, suffered from defective vision and squint. As soon as the parents could be prevailed upon to have this defect treated by suitable glasses she at once began to write normally, and has continued to do so since. The other case was one of a single aberration, due to excitement; neither before nor since has she written in this way.

### EXAMINATION VAGOTONIA.

DR. C. FRASER BROCKINGTON (Leicester), in the course of a letter dealing with the mental paralysis which assails some candidates during the oral examination, writes: Vagotonia may not be the sole cause, but it is the cause of the worst degrees of "viva palsy." Such vagotonics normally exhibit sinus arrhythmia, have a pulse of 60, and in times of mental stress they sweat abnormally, experience inertia, and suffer from looseness of the bowel. There is a long latent period between the acception of the sensory stimulus and the resultant motor activity. As a result these candidates appear dull and stupid. When they are questioned they are seized with panic and feel they must answer something, even if it be the first available thought. Only too often they answer incorrectly. Perhaps these neurotics would be helped immensely by the knowledge that examiners were aware of their condition.

### PHLEBITIS.

MR. A. P. BERTWISTLE, F.R.C.S.Ed. (Harrow), writes: I am much interested in the letter of "M.D." on December 15th, 1928 (p. 1112); a well-recorded personal case, as Paget showed so admirably, is of infinite value. His phlebitis bears many points in common to one I reported in the *British Journal of Surgery*, 1928 (p. 275). If, as appears not improbable, the lymphatics become infected, there is a grave danger of elephantiasis developing. I should like to know whether he has had his teeth *x*-rayed. If he has any dead ones I should recommend their extraction, as a radiogram may, at times, fail to reveal infection. I do not think that any staphylococcal vaccine or serum is of service in these cases, though antistreptococcal serum is of definite value for this and many other conditions.

### A WARNING.

A CORRESPONDENT informs us that a person representing himself to be Dr. E. S. Dufty, of Oldbury Road, Smethwick, Birmingham (who died on September 11th, 1928), called upon a medical practitioner in London recently and obtained the loan of a sum of money, after stating that he had left his pocket-book at home. It is also stated that this person has been ordering goods at various London shops in the name of the late Dr. Dufty. We understand that the matter has been reported to the police, but medical practitioners will do well to be on their guard against persons who approach them in this manner.

### VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 49, 50, 51, 52, 53, 56, 57, and 58 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 54 and 55.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 7.

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❖ ❖

The following tables are extracted from an article published in the *Schweizerische Medizinische Wochenschrift*, by Drs. Uhlmann and Burow:

MEAT DIET (WITH PURINS)

| In 24 hours | Without Treatment | Atoquinol | Phenylcincho-ninic Acid |
|---|---|---|---|
| Urine | 3990 c.c. | 3345 c.c. | 3450 c.c. |
| Uric Acid | 2.03 grm. | 3.01 grm. | 2.63 grm. |

VEGETARIAN DIET (WITHOUT PURINS)

| In 24 hours | Without Treatment | Atoquinol | Phenylcincho-ninic Acid |
|---|---|---|---|
| Urine | 3550 c.c. | 3515 c.c. | 3515 c.c. |
| Uric Acid | 0.91 grm. | 2.20 grm. | 1.28 grm. |

COMPARATIVE TESTS

| Daily Uric Acid Elimination | Atoquinol (oral) | Atoquinol (cutaneous) | Phenylcin choninic acid (oral) | Piperazine (oral) |
|---|---|---|---|---|
| | 11.92 grm. | 10.08 grm. | 10.92 grm. | 7.68 grm |

**It will be seen from the above tables that the daily elimination of uric acid is greater when Atoquinol is used than with the phenylcinchoninic acid. Also in the third table it will be noticed that the cutaneous administration of Atoquinol by means of the ointment is most effective in causing an active elimination of uric acid.**

❖ ❖

In an article in *The Lancet*, May 12th, 1928, on "The Treatment of Toxic Peri-Arthritis," the author refers particularly to the value of Atoquinol in fairly large doses (six tablets per diem) for a long period in such cases. It was given in periods of three days on and three days off with large draughts of water. The author states that in the course of four years in 87 cases treated he has never seen Atoquinol give rise to any untoward symptoms.

❖ ❖

In the *British Medical Journal*, January 7th, 1928, a correspondent states that he has never found any trouble or discomfort to occur after the taking of allyl ester of phenylcinchoninic acid.

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